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NUREG-0675
Supplement No. 33

MAY 1986

Safety Evaluation Report
related to the operation of Diablo Canyon Nuclear Power Plant, Units 1 and 2

Docket Nos. 50-275 and 50-323

Pacific Gas and Electric Company

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U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

May 1986

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ABSTRACT

Supplement 33 to the Safety Evaluation Report for the Pacific Gas and Electric Company's Diablo Canyon Nuclear Power Plant, Units 1 and 2 (Docket Nos. 50-275 and 50-323) has been prepared jointly by the Office of Nuclear Reactor Regulation and the Region V Office of the U.S. Nuclear Regulatory Commission. The supplement reports on the status of the staff's investigation, inspection, and evaluation of allegations and concerns that have been identified to the NRC through March 1986. The report includes a complete listing of all allegations and concerns, indicating the status of their resolution. The NRC staff concludes that the technical issues raised in the allegations with regard to the design, construction, and safe operation of Diablo Canyon Units 1 and 2 have been satisfactorily resolved and no further action is required.

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1.0 BACKGROUND AND INTRODUCTION

1.1 SSER-33 Scope, Content, and Availability

The staff of the U.S. Nuclear Regulatory Commission (the NRC, the staff) issued on October 16, 1974 its Safety Evaluation Report (SER) in matters of the application by the Pacific Gas and Electric Company (PG&E) to operate the Diablo Canyon Nuclear Power Plant, Units 1 and 2 (Diablo Canyon, the plant). The SER has since been supplemented by Supplement 1 (SSER-1) through Supplement 32 (SSER-32). This report is SSER-33. It provides the staff final evaluation and resolution of concerns and allegations that were identified to the staff from early 1983 through March 1986.

Section 1 of this report provides background and introductory informaton on the recent NRC licensing actions for Unit 1 and Unit 2 of the Diablo Canyon Nuclear Power Plant. Section 2 describes various approaches used by the staff for the resolution of allegations and the current status of the staff evaluation. The staff conclusions are summarized in Section 3. Detailed information on the staff review and evaluation is contained in the Appendices. Appendix A contains staff assessments and positions for individual allegations. Appendix B includes Region V Inspection Reports, totally or in part, for those allegations that were resolved as a result of an inspection. Appendix C contains minutes of Allegation Board Meetings (ABM) for those allegations that were resolved by such meetings. Appendix D includes other reports and documents frequently referred to in SSER-33. All of the reports and documents included in Appendices A, B, and C have previously been issued and are available for inspection at the NRC Public Document Room in Washington, D.C. and at the NRC Local Public Document Room in San Luis Obispo. They have been included in SSER-33 to provide in one document all the elements of the staff evaluation. Appendix E provides the complete list of allegations, status, documentation of resolution and Unit 2 applicability.

This report was prepared jointly by the NRC Office of Nuclear Reactor Regulation in Washington, D.C. and the NRC Region V Office in Walnut Creek, California. The NRC Licensing Project Manager for the Diablo Canyon Nuclear Power Plant is Mr. Hans Schierling, Division of PWR Licensing-A, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Mr. Schierling can be reached at (301) 492-8856. Copies of this report are available for public inspection at the NRC Public Document Room (PDR) at 1717 H Street, N.W., Washington, D.C., (202) 634-3273, and at the NRC Local PDR for the Diablo Canyon Plant at the California Polytechnic State Unviversity, Documents and Maps Department, San Luis Obispo, California 93407. The availability of all material cited is described on the inside front of this report.

1.2 Recent Licensing Actions

The identification of allegations regarding the Diablo Canyon Nuclear Power Plant and the NRC effort to resolve the allegations was directly associated with and took place during the latter part of the licensing of Diablo Canyon Unit 1 and Unit 2 from 1981 through 1985. The various NRC licensing actions as described below were based on staff evaluations documented in SSER-16 through SSER-32, as listed in Table 1.1.

On September 22, 1981 the NRC issued a low-power license for Unit 1 (i.e., for fuel loading, criticality, and operation up to five percent of the rated power level). As a result of a design error, identified by PG&E to the NRC in September 1981, the Unit 1 low-power license was suspended, pending the completion of an Independent Design Verification Program (IDVP), which subsequently was initiated by PG&E, approved by the NRC and essentially completed by the end of 1983. Design quality assurance (DQA) was a major element of the IDVP and was the subject of hearings by the Atomic Safety and Licensing Appeal Board (ASLAB) in late-1983. The low-power license was partially reinstated for fuel loading and hot functional testing on November 8, 1983, based on staff evaluations in SSER-18 and SSER-19. It was fully reinstated on April 13, 1984 based on further staff evaluations of IDVP matters in SSER-20 and of allegations in SSER-16, 17, 21 and 22 that had been identified to the staff prior to mid-March 1984. As a result of allegations related to the analysis design and installation of piping and pipe supports for Unit 1, a license condition was included in the reinstated low-power license requiring PG&E to verify the safety adequacy. On August 10, 1984 the Commission authorized issuance of the Unit 1 full-power license. The Commission's decision was based on the staff evaluation of certain fire protection matters as discussed in SSER-23, of outstanding IDVP issues is discussed in SSER-24, of the piping and pipe support aspects identified in the reinstated low-power license and as discussed in SSER-25, of allegations received prior to July 1984 as documented in SSER-26, and of numerous other issues pertaining to the Unit 1 full-power operation as discussed in SSER-27. The Unit 1 full-power license was issued on November 2, 1984.

While the licensing process for Unit 1 was ongoing in 1983 and 1984, PG&E also performed the necessary evaluations, analyses, appropriate design changes, and plant modifications for Unit 2. The staff evaluated these Unit 2 efforts regarding (1) the design verification that had resulted from the Unit 1 IDVP findings, as discussed in SSER-29, (2) the piping and pipe supports concerns that had been raised on Unit 1 and had resulted in the Unit 1 low-power license condition, as discussed in SSER-30, and (3) the resolution of a variety of Unit 2 low-power operating licensing matters as discussed in SSER-31. Based on these evaluations the Unit 2 low-power license was issued on April 26, 1985.

The staff evaluation regarding Unit 2 full-power operation, including resolution of allegations as necessary was documented in SSER-32 in July of 1985 and the Commission issued the full-power license in August 1985.

TABLE 1.1

Diablo Canyon Units 1 and 2

Safety Evaluation Report Supplements (SSER's) Issued in 1983-1985 Regarding NRC Licensing Actions

SSER-16	(August 1983):	Allegations and Concerns on Component Cooling Water (CCW) System
SSER-17	(February 1984):	Breakwater; Allegations on "Superstrut" Type Supports
SSER-18	(August 1983):	IDVP Evaluation
SSER-19	(October 1983):	IDVP Evaluation: Resolution of Issues Regarding Fuel Loading of Unit 1
SSER-20	(December 1983):	IDVP Evaluation: Resolution of Issues Regarding Criticality and Low-Power Operation of Unit 1
SSER-21	(December 1983):	Allegations Received as of Mid-December 1983: Resolution Regarding Fuel Loading of Unit 1; (Staff Evaluation of Sensitive Allegation Information contained in Report for NRC Internal Use Only)
SSER-22	(March 1984):	Allegations Received as of Early-March 1984: Resolution Regarding Criticality and Low-Power Operation; Detailed Information on NRC Diablo Canyon Allegation Management Program (DCAMP); (Staff Evaluation of Sensitive Allegation Information contained in Report for NRC Internal Use Only)
SSER-23	(June 1984):	Fire Protection: Evaluation Regarding Full-Power Operation
SSER-24	(July 1984):	IDVP Evaluation: Resolution of Issues Regarding Unit 1 Full-Power Operation
SSER-25	(July 1984):	Piping and Pipe Supports: Evaluation Regarding Unit 1 Full-Power Operation, Including Related Allegations
SSER-26	(July 1984):	Allegations Received as of Early-July 1984: Resolution Regarding Unit 1 Full-Power Operation
SSER-27	(July 1984):	Resolution of Issues Regarding Unit 1 Full-Power Operation

SSER-28 (April 1985): Allegations Received as of Early-March 1985: Resolution of Allegations Regarding Full-Power Operation of Units 1 and 2

SSER-29 (March 1985): IDVP Evaluation: Resolution of Issues Regarding Unit 2; Other Matters Regarding Unit 2

SSER-30 (April 1985): Piping and Pipe Supports: Evaluation Regarding Unit 2, Including Related Allegations

SSER-31 (April 1985): Evaluation of Issues Regarding Unit 2 Fuel Loading, Criticality and Low-Power Operation

SSER-32 (July 1985): Evaluation of Issues Regarding Unit 2 Full-Power Operation, Including Overall Status of Allegation Review.

SSER-33 (April 1986): Allegations: Final Evaluation Regarding Units 1 and 2

2 STATUS AND SUMMARY OF STAFF EVALUATION OF ALLEGATIONS

2.1 Staff Review and Evaluation Process

During the latter part of the Independent Design Verification Program (IDVP) for Diablo Canyon Unit 1, the Commission received allegations from a variety of sources concerning the design, construction, and operation of the facility and the PG&E management of these activities. The first allegations were received in early-1983 from an individual who raised concerns regarding the design and operation of the component cooling water (CCW) system for the Diablo Canyon Plant. The staff initiated a detailed review and evaluation which subsequently led to a revision of the Technical Specifications regarding the temperature limits for the cooling water from the Pacific Ocean which is used as the ultimate heat sink. The evaluation is reported in SSER-16. The specific allegations were also included in the Allegation Tracking System (ATS) and the Region V allegation listing (Appendix E).

In late 1983 numerous allegations were received from individuals, predominantly current and former employees of PG&E, Bechtel and their contractors, primarily regarding the design adequacy of small bore piping and pipe supports. While these allegations were also entered into the Region V allegation listing (Appendix E), the staff initiated in late 1983 an inspection and evaluation effort which included audits of records and calculation packages at the PG&E/Bechtel Offices in San Francisco, documentation and hardware inspections at the Diablo Canyon site, and meetings with PG&E. As a result, the NRC staff verified some of the concerns and identified additional ones on small and large bore piping and supports regarding the adequacy of PG&E/Bechtel corrective action, training of site personnel performing the calculations, quality assurance requirements and controls, and adequacy of samples selected to verify the design. A special NRC Review Group, formed in late-March 1984, concluded that none of the issues should preclude low-power operation of Diablo Canyon Unit 1. The group recommended that certain technical issues should further be evaluated. Seven specifications were included as a license condition in the reinstated Unit 1 low-power license.

The results of the staff evaluation of the PG&E effort are presented in SSER-25 regarding Unit 1, SSER-30 regarding Unit 2, and in a Board Notification (Appendix C) regarding programmatic aspects.

As a result of the growing number of allegations in late-1983 the Commission also requested that a status report on the staff's investigation, inspection, and evaluation be issued before the Commission reached its decisions regarding the authorization of criticality and low-power operation for Unit 1. To ensure that the responses to all allegations concerning the facility were both adequate and coordinated, the staff developed the Diablo Canyon Allegation Management Program (DCAMP). This program was designed, among other things, to recognize that the resolution of these allegations would involve personnel from a number of NRC Offices and Regions. The DCAMP was established in a document dated November 23, 1983, which was transmitted to the Commission on November 29, 1983, by the Executive Director of Operations.

The scope, methodology, and implementation of DCAMP were previously discussed in detail in SSERs 21, 22, 26, and 28. It provides for a systematic examination and analysis of allegations and expressions of concern pertaining to the design, construction, operation, and management of safety-related structures, systems, and components at the Diablo Canyon plant. It provides for procedures to maintain confidentiality where requested, confirmation with an alleger where appropriate, and appropriate and preliminary assessments of the significance of allegations and their programmatic implications before the Commission considers specific licensing actions. The resolution of allegations may involve site inspections, technical reviews, interviews with site personnel, and public technical meetings.

In SSER-22 the staff established the criteria which were applied throughout the licensing process of Unit 1 and Unit 2 to assess the safety significance of the allegations in order to determine which allegations or concerns required resolution prior to authorization of specific plant operational modes (e.g., criticality, low-power and full-power operation). The approach in evaluating each allegation has been to determine whether it represents significant new information that suggests that some safety-related structure, system, or component necessary for safe operation would not perform its safety function, or whether it identifies such weaknesses in the PG&E management or quality assurance program that plant safety is called into serious question.

Accordingly, the following reports as listed in Table 1.1 were issued for the licensing of Units 1 and 2: SSER-21 regarding Unit 1 fuel loading, SSER-22 regarding Unit 1 criticality and low-power operation, SSER-25 and SSER-26 regarding Unit 1 full-power operation, and SSER-28 and SSER-30 regarding Unit 2 low- and full-power operation, respectively.

The documentation of the staff evaluation of each specific allegation is identified in Appendix E, including references to earlier allegation SSERs. For the majority of allegations the staff documented its resolution as individual allegation evaluations in this report (Appendix A) and previous reports. The NRC Office of Nuclear Reactor Regulation (NRR) applied this approach to all allegations within its scope. The NRC Region V Office evaluated and resolved numerous allegations on the basis of inspections. These were documented in Inspection Reports that already have been issued and appropriate parts have been included in this report (Appendix B). For a number of allegations the Region V Office requested PG&E to address the concerns. The responses were reviewed by the staff at Allegation Board Meetings (ABM) and the resolutions were documented in the minutes of such meetings (Appendix C).

Allegations involving a concern of potential willful or intentional wrongdoing and/or intimidation of an individual were evaluated and investigated by the NRC Office of Investigations (OI), Region V Field Office. These allegations are included in the listing of Appendix E. Their status of resolution was periodically reviewed at Allegation Board Meetings. Because of the sensitive nature of these allegations the specifics of the concerns have been listed as "sensitive" in Appendix E. The results of the OI investigations and/or reports of inquiry were reviewed at ABMs. In cases not involving any safeguards matter, a synopsis of the investigation was issued and placed in the Public Document Room (PDR), similar to an inspection report. Inquiries are cases in which OI

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garners available information but, based on a review of that information, determines that the matter does not warrant any further investigation unless specifically requested by the Region, based on the ABM evaluation of the merits of the case. The minutes of all ABMs were placed in the PDR. The inquiry report and documentation are witheld from the PDR since it contains sensitive information, including the identity of the alleger.

Allegations which relate to potential improper actions by the NRC staff were reviewed in Allegation Board Meetings and then referred to the NRC Office of Inspector and Auditor (OIA) for investigation and resolution as appropriate. Such transfer to OIA closes the allegation with respect to the safety significance to the plant as reported in Appendix E of this report.

2.2 Status of Allegation Review

SSER-28 was the last report regarding the staff evaluation of allegations. It was issued in April 1985, specifically in support of the Unit 2 low-power licensing. The report addressed the 1665 individual allegations or concerns that had been identified to the NRC as of March 1, 1985. The resolution status of these 1665 allegations was as follows (SSER-28, Appendix A, Attachment 1):

	Resolved	Open	Total
Region V	996	68	1064
NRR	138	264*	402
OI	13	185	198
OIA	0	1	1
Total	1147	518	1665

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*230 of the 264 allegations were resolved for Unit 1 in SSER-28, but the Unit 2 applicability code had not been identified.

In SSER-28 the staff had determined that its efforts regarding the 1665 allegations was sufficiently complete to conclude that none of the allegations, either individually or collectively, indicated a problem of such magnitude that should preclude the continued operation of Unit 1 at full-power or the full-power licensing of Unit 2. The staff further stated that it was continuing its investigation, inspection and evaluation of the allegations not yet completely resolved.

As stated in SSER-28, Section 4, the Government Accountability Project (GAP) submitted by letter dated March 14, 1985 an additional amendment to a previous petition submitted pursuant to 10 CFR 2.206. The letter included affidavits which identified 51 further allegations not previously included in the 1665 allegations. As stated in SSER-32, the staff completed a screening review of the additional allegations and determined that none of them was of such safety significance as to preclude continued full-power operation of Unit 1 or issuance of a full-power license for Unit 2.

On July 15, 1985 the Office of Investigations (OI), Field Office-Region V, received additional documents from GAP. These documents were also provided on July 18, 1985 to the Regional Administrator, Region V, for review and appropriate action. As documented in the minutes of the Allegation Review Board on August 6, 1985 (Appendix C) the Board reviewed the documents in accordance with the criteria presented in SSER-22 and determined the documents contained four (4) additional allegations that had not been previously addressed. These allegations were entered into the allegation file system (Appendix E). Additionally, in accordance with the Commission's Statement of Policy (50 FR 11030), the staff completed a screening review and determined none of these allegations were significant enough to preclude continued full-power operation of Unit 1 or full-power licensing of Unit 2.

During a review of earlier allegation submittals the staff determined that three (3) allegations had not been appropriately identified. These were subsequently included in the allegation file system. Finally, five (5) concerns were raised by individuals after issuance of SSER-28. They also have been included.

In summary, at total of 1728 allegations were identified to the staff as of March 1986 as follows:

1665	listed in SSER-28 of April 1985
51	in GAP submittal of March 14, 1985
4	from GAP on July 15, 1985
3	previously unidentified
5	from individuals after SSER-28 issuance
1728	total

(Note: Appendix E lists 1726 allegations in numerical order; Allegations 6A and 61A are additional allegations.)

Seven allegations were identified in an Allegation Board Meeting on January 7, 1986, as relating to potential improper action by the NRC staff. These allegations were referred to the Office of Inspector and Auditor (OIA) and, on that basis, are considered closed with respect to the safety of the plant as reported here. Five of these allegations already had been included in an OIA audit of the Diablo Canyon Allegation Management Program (DCAMP) which was conducted in 1985. The results of this audit were reported by OIA in an NRC internal management document to the Commission, dated March 25, 1986.

Ten allegations that relate to potential willful wrongdoing and/or intimidation of individuals were included in three cases that are still under investigation by the Office of Investigation (OI), Region V Field Office. Although the technical aspects of these ten allegations have been evaluated by the staff and are considered resolved, these allegations, in accordance with the DCAMP procedures, cannot be considered closed. Thus, final resolution will be documented in separate future OI reports for each of the three cases.

Throughout the course of its evaluation of allegations the staff performed site inspections, interviews with site and office personnel, meetings with the licensee and audits of records; the staff requested additional information from the licensee and the licensee took appropriate actions when required. As a result, the staff identified in its evaluation of individual allegations in earlier reports that certain specific further action was required by the licensee or the staff to resolve the concern raised in the allegation. All these actions have now been completed and no further action is required as indicated in the individual assessments for allegations in Appendix A (i.e., "Action Required: None."). The staff has completed its technical review and evaluation of all 1728 allegations and has determined that no further action is required regarding the safety of the plant.

3 SUMMARY AND CONCLUSIONS

(1) As of March 1986, a total of 1728 allegations or concerns were identified to the NRC regarding the design, construction, operation, and management of the Diablo Canyon Nuclear Power Plant.

(2) Upon receipt each allegation was reviewed, using the priority resolution criteria presented in SSER-22 to determine if any immediate NRC action was required and a priority resolution was assigned.

(3) All allegations were reviewed with respect to Unit 1 and Unit 2, regardless of their stated specificity to either unit.

(4) Throughout the licensing process for Unit 1 and Unit 2 from 1983 through 1985 all allegations were reviewed and evaluated prior to a specific licensing action in sufficient detail to conclude that none of the allegations, either individually or collectively, indicated a problem of such magnitude that should preclude the specific licensing action under consideration.

(5) As of April 1986 all 1728 allegations have been reviewed, evaluated, and resolved regarding their safety significance to the plant. In accordance with the DCAMP procedures 1718 allegations have been fully resolved, including those allegations that were referred to OIA because of potential improper action by the NRC staff. Ten allegations continue to be the subject of still ongoing OI investigations; their final solution will be documented in separate future OI reports.

APPENDIX A

INDIVIDUAL ALLEGATION ASSESSMENTS

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Task: Allegation or Concern No. 12

ATS No.: NRR-83-04

Characterization

The high energy line break (HELB) assessment did not meet the FSAR or RG 1.46 requirements.

This allegation was previously addressed in SSER-21 and SSER-22.

Implied Significance to Plant Design, Construction, or Operation

Safety related piping inside containment may not be properly designed to withstand jet impingement load from postulated pipe ruptures.

Assessment of Safety Significance

See at Allegation 12 in SSER-21.

Staff Position

In SSER-21 of December 1983 the staff stated that upon completion of the then ongoing jet impingement evaluation PG&E would submit a report to the staff identifying those targets for which additional protection would be required to meet current staff criteria. If modifications to achieve substantial additional protection were found to be necessary these modifications would be required before start-up after the first refueling. This staff position was reaffirmed in SSER-22 of March 1984.

The issue of protection against jet impingement was identified by the staff as a result of the Independent Design Verification Program (IDVP) as addressed in SSER-18 and SSER-20. PG&E provided its analysis in a letter dated February 4, 1984 (DCL-84-041). In addition, the Atomic Safety and Licensing Appeal Board identified this matter in its decision of March 20, 1984 (ALAB-763). The PG&E response was provided in a letter of April 9, 1984 (DCL-84-137). The staff evaluation of this issue was provided in SSER-24 of July 1984 at "Open Item 29". The staff concluded that the information submitted by PG&E is acceptable. This concern is resolved.

Action Required

None.

TASK: Allegation or Concern No. 100

ATS NO: RV-83-A-0069

Characterization

No quality control program for painting inside containment, potential impact on performance of safety systems. This allegation also includes concerns expressed in Allegations 638 through 645. Allegation 100 was previously addressed in SSER-21, SSER-22 and SSER-26.

Implied Significance to Plant Design, Construction, or Operation

Unqualified coatings and qualified protective coatings which have been improperly applied, i.e., relative to applicable regulations and standards, or without a required quality assurance program can produce peeling, flaking, or chalking of portions of the coating under design basis accident (DBA) conditions. The resultant debris to the containment sump may affect the performance of safety systems, such as the containment spray or emergency core cooling system. These concerns were restated in Allegations 638 through 645 as contained in a GAP petition under 10 CFR 2.206 of March 1, 1984, (items 203 through 210).

Assessment of Safety Significance

In SSER-26 (July 1984) the staff resolved the issue of Allegation 100 concerning unqualified paints inside containment. The staff reported that it was acceptable for the plant to operate with the potential of 3 cubic feet of solid debris generated from unqualified paints inside containment under DBA conditions. However, in a letter of February 9, 1985 (DCL-85-058) PG&E revised the potential debris source term upward. Based on the new information, the staff calculated that the paints inside containment could generate 28.2 cubic feet for Unit 1 and 29.1 cubic feet of debris for Unit 2.

Staff Position

The NRC Standard Review Plan (SRP), Section 6.6.2, Rev. 1 (December 1978) acceptance criterion II.2.C permits non-qualified coatings if it can be justified that the debris generated from unqualified coatings will not adversely affect the performance of post-accident fluid systems.

The staff calculated the amount of debris that could be generated as a result of a design basis accident. As stated in PG&B letter of February 9 and April 25, 1985 (DCL-85-058 and DCL-85-166) PG&E analyzed the effects of this debris on containment recirculation sump performance. PG&E conservatively assumed that all paint debris is transported to the sump screen and is deposited on the screen at a 45° angle from the base. This results in a remaining unblocked screen area of 90 ft^2, which is more than 12 times the area needed to support the required RHR flow rates during the recirculation phase of a LOCA. Based on its evaluation, the staff finds that the coating generated under DBA conditions will not impair post-accident fluid systems performance. As stated in the April 25,1985 letter and in a letter of May 10 1985 (DCL-85-182), PG&E performed additional confirmatory evaluations to support the conclusions. Furthermore, PG&E committed (letter DCL-85-108, dated March 13, 1985) to implement a containment coatings surveillance program, which provides additional assurance that deteriorating paint will be identified early and remedial action taken.

Based on its evaluation, the staff has determined there is reasonable assurance that debris generated by the failure of unqualified coatings inside of containment under design basis accidents will not adversely affect the performance of post-accident fluid systems. Therefore, the staff concludes that the unqualified coatings will not endanger the health and safety of the public and the issue is resolved .

Action Required

None.

Task: Allegation or Concern No. 147

ATS No.: RV-84-A-0015

Characterization

Cable trays and conduits of independent and redundant trains were installed on common race way supports. The allegation was previously addressed in SSER-22.

Implied Significance to Plant Design, Construction, or Operation

See at Allegation 147 in SSER-22.

Assessment of Safety Significance

See at Allegation 147 in SSER-22.

Staff Position

The staff determined in SSER-22 that the installation of mutually redundant Class 1E circuits on the same Class 1 supports in the cable spreading room was a deviation from the PG&E commitment that such trains would not be installed in this manner (FSAR Section 8.3.1). Regulatory Guide 1.29 is the staff position regarding the need for seismically qualified supports. The guide does not include a requirement for independent supports for independent trains. In the FSAR Update of September 1984 PG&E revised its design approach and identified the cable spreading room under the control room and elevation 100 feet in the fuel handling building as areas where redundant trains are installed on the same seismically qualified supports. The staff has reviewed the information and finds the design and installation acceptable in accordance with Regulatory Guide 1.29.

In addition, as a result of its review efforts regarding the Independent Design Verification Program (IDVP) for Unit 1 in 1982 and 1983 the staff had identified a concern regarding the seismic qualification of cable trays and the effects of potential interactions between cable trays and their supports (SSER-18, August 1983). The final staff evaluation of this matter is addressed in SSER-29 (March 1985). The cable trays were qualified generically for the DDE and Hosgri event. Where the cable trays could not be qualified generically the as-built conditions were analyzed. The supports were evaluated by two separate analyses, one considered the support itself, the other considered a coupled system. The staff found the approach acceptable for Unit 1. PG&E applied the same approach for the Unit 2 cable tray evaluation.

The staff has evaluated the concern expressed in Allegation 147. Based on its earlier evaluation in SSER-22, the revision in the FSAR, and the staff evaluation regarding the seismic qualification of supports in SSER-29, the staff concludes the allegation is resolved.

Action Required

None.

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Task: Allegation or Concern No. 152

ATS No: RV-84-A017

Characterization

Concerns with installation of P 1331 conduit clamps. Three specific concerns were identified: 1) P 1331 inner bolts cannot be torqued to the specified torque; 2) the torque relaxes after several days; and 3) the torque values specified are excessive.

Implied Significance to Plant Design, Construction, or Operation

Improper installation of P 1331 conduit clamps might result in raceway supports being incapable of performing their intended functions.

Assessment of Safety Significance

As documented in Inspection Report Nos. 50-275/85-08 and 50-323/85-09 (Appendix B to this SSER), the staff verified that, prior to this allegation, the licensee had identified electrical raceway supports that were not torqued to values required for seismic design conditions. The licensee subsequently issued 1625 torque modification packages for Unit 2 raceway supports to correct these deficiencies. During the implementation of the torque modification program, the licensee identified 159 torque modifications that could not be accomplished as originally specified.

Additional engineering analysis was required on these torque modifications, 78 of which involved P 1331 clamps. Original torque modifications required all clamp bolts regardless of position, inner or outer, to be torqued to the value required for the critical load-bearing bolt or bolts on the clamp. Subsequent torque modifications identified the specific bolts that required torquing. To accomplish seismic hardening of the clamps, either an alternative method to torque the inner bolts (if they were load-bearing) was utilized, or other methods such as increasing the torque on other bolts, or welding were used. The staff reviewed the revised torque modifications on a sampling basis to ensure that the inner bolt torquing concern was identified and adequately addressed by the licensee.

The staff determined that the second concern regarding bolt relaxation was addressed by the licensee, prior to implementation of original torque modifications. The licensee contracted ANCO Engineers Inc. to conduct tests to determine the slip-resistance capacity of bolted connections for various nut types and bolt torques. These test results were utilized by the licensee in preparing the original torque modifications. The inspector reviewed portions of the ANCO Engineering's Test Report which verified no significant bolt relaxation was observed during testing.

It was also determined that the third concern stating the torque values specified were excessive was addressed by the licensee prior to receipt of this allegation. When the higher "excessive" torque value of 85 ft-lbs was required by engineering analysis, a Design Change Notice (DCN) was issued which included a hardware change to bolts that had been tested for both slip-resistance and torque relaxation at this higher torque. The inspector verified that the DCNs included such hardware changes.

The staff found that the licensee properly identified and dispositioned these installation concerns prior to the allegation, and there is acceptable assurance that raceway supports were properly installed. Furthermore, in Section 6 of Supplemental Safety Evaluation Report No. 29, March 1985, the staff concluded the methods used by the licensee to evaluate electrical raceway supports including actual bolt torque levels were acceptable.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 162

ATS No.: RV-84-A-001

Characterization

The alleger states that the reviewer changed a number of calculations without consulting the original preparer and checker. Allegation 162 was previously addressed in SSER-28 (April 1985).

Implied Significance to Plant Design, Construction, or Operation

The person who compiles the calculations had a definite process in mind and has, in many cases, made some pertinent assumptions. If someone changes these calculations the results could become questionable. (See also SSER-28).

Assessment of Safety Significance

See SSER-28.

Staff Position

As stated in SSER-28, the staff determined on the basis of its review of selected samples that the safety implication of Allegation 162 was insignificant. The staff also found that the allegation was correct in that some names and signatures of originators and/or checkers were erased and replaced. The staff concluded that a general QA audit of the PG&E calculation books should be conducted to ensure that proper QA procedures have been observed.

In a letter of April 5, 1984 (DCL-84-133) PG&E addressed this allegation in Item 3, and described the completion and transfer mechanism of calculation assignments. The staff inspected selected calculation books and in particular calculations 1005C-1, 1010C-5 and 1065C-1 for the containment annulus steel structure. The staff also audited the PG&E Nuclear Engineering Manual, Procedure 3.3, "Design Calculations" which establishes how design calculations are prepared, checked, approved and documented, including earlier versions that were effective when the above calculations had been performed (Rev. 5, dated 7/15/83; Temporary Rev. 8, dated 2/15/83; Rev. 8, dated 11/8/85). These versions of Procedure 3.3 specify the responsibilities of individuals and requirements for design calculations. The procedure does not include a requirement that precludes changes to the design calculation prior to the approval by the engineering discipline group leader or supervisor. The procedure does specify the controls and documentation of design calculations after their approval to ensure that such changes are controlled. PG&E stated during the inspection that the Nuclear Engineering Manual had been audited by the PG&E QA organization and had been found acceptable. The staff finds the changes to the design calculations as observed to be consistent with the applicable PG&E procedures. The review of the three selected design changes did not identify a deviation from Procedure 3.3.

The staff concludes, based on the information provided by PG&E in its letter and during the staff inspections and based on its review of the applicable procedures for design calculations, that signature changes are appropriate and acceptable if the completion of design calculations is transferred between individuals and prior to final approval by the engineering discipline group leader or supervisor. The technical adequacy of the calculation was previously found acceptable in SSER-28. The staff concludes that this allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 163

ATS No.: RV 84A002

Characterization

The subject of this allegation is the effect of differential temperatures throughout the annulus steel and between the annulus steel and the concrete crane wall, on member stresses in the annulus steel structure. Specifically the following three concerns were raised:

a. Temperature differentials that occur in the transient condition during plant startup and shutdown.

b. Local temperature differentials in supporting structural members of the framing system caused by the thermal environment in the supported pipe.

c. Local temperature effects due to jet impingement.

This allegation was previously addressed in SSER-28 (April 1985).

Implied Significance to Plant Design, Construction, or Operation

Item (a) of the allegation is significant in that temperature changes in the concrete are slower than in the steel as the ambient temperature in the annulus region changes during startup or shutdown. Since the annulus steel is constrained by the concrete in the crane wall, differential temperatures between the steel and concrete could induce thermal stresses in the steel.

The second and third part of the allegation (Items (b) and (c) above) deal with local temperature differentials in the steel frame structure itself caused by heat from either pipe supports or jet impingement loads from a pipe break. In either case the result would be differential axial expansion of a steel member and bowing of the member due to the induced thermal gradient across the thickness of the member. Both effects would introduce stresses in the member because of the member constraints.

The potential thermal stresses due to jet impignment were not included by PG&E in the evaluation of the annulus steel members. The objective of the audits performed by the staff in February 1984 were to evaluate the significance of these stresses.

Assessment of Safety Significance

In SSER-28 the staff stated that PG&E should consider the thermal stresses induced into the annulus steel by a maximum thermal gradient of 40°F which could exist between the steel and crane wall concrete during shutdown. This issue was addressed by PG&E in a letter dated April 5, 1984 (DCL-84-133). It was shown that the maximum thermal stress in the steel is 7.56 ksi for the conservative assumption that the concrete wall completely constrains the steel. Most codes (e.g., ASME, ANSI) permit an increase of allowable stresses of at least 1/3 when transient thermal stresses are considered. The minimum allowable stress is 21.6 ksi for the cases when thermal stresses are included. Since the 1/3 increase in the allowable stress (i.e., 7.2 ksi) is almost equal to the thermal stress of 7.56 for the completely confined steel, PG&E stated that the factor of safety for load combinations including the transient thermal loadings will be equal to or greater than the factor of safety for load combinations already considered. The inclusion of the concrete flexibility in the thermal analysis would significantly reduce the 7.56 ksi stress. The same analysis applies to Unit 1 and Unit 2. The staff has reviewed the information provided by PG&E. The staff concurs with this assessment and considers this part of the allegation closed for Unit 1 and Unit 2.

The second issue raised in SSER-28 concerns the thermal gradients introduced in the annulus steel through the pipe supports. This issue was also addressed in the letter of April 5, 1984 (DCL-84-133). An attachment to the letter contained temperature distribution data measured on five different types of Grinnell engineered pipe supports. In all cases the pipe contained steam at about 900°F while the ambient temperature was about 90°F; a 4 inch thick combination insulation was placed around the pipe. Thermocouples were placed at various locations on the pipe supports. The pipe support temperature approached ambient at distances of 1 to 2 feet from the pipe. Main structural steel is not located within these ranges. PG&E concluded that pipe supports would not produce thermal gradients in the primary structural steel. The staff has reviewed the information and concurs with this conclusion. This response and this evaluation apply equally to Unit 1 and Unit 2.

The third issue raised in SSER-28 concerns the local thermal gradient which could be caused by a pipe break. This issued was addressed by PG&E for Unit 1 in its letter of April 5, 1984 in which two potential pipe breaks were identified. One at column line 8 was located such that the maximum surface temperature reached 170°F at a localized region. The other at column line 6 resulted in a peak surface temperature of 500°F. There is little restraint to prevent the column from expanding vertically so that no increase in column axial stress can develop. However because of the temperature gradient across the thickness of the column, there will be a bending moment introduced into the column. The stresses due to bending are low enough so that the functionality of the column is not impaired.

During its May 30, 1985 audit the staff raised the question whether the axial expansion of the column would adversely affect the floor slab at Elevation 140 feet. PG&E responded in a letter dated June 14, 1985 (DCL-85-213) and stated that the moments and shears introduced in the slab by the expansion of column 4 are within allowable limits.

PG&E responded to the Unit 2 jet impingement issue in the letter of June 14, 1985. As in Unit 1, columns 6 and 8 are two locations in Unit 2 where a pipe break could result in a jet impingement on a column. The conditions are the same as for Unit 1. Therefore, the above discussion applies equally to Unit 2.

Staff Position

Based on its evaluation of the allegation, audits performed and review of information provided by PG&E the staff considers the issues associated with Allegation 163 resolved.

Action Required

None.

Task: Allegation or Concern No. 169

ATS No: RV-84-A-022

Characterization

Pullman failed to conduct support welding as required by procedure and QA wrongfully approved the technique.

Implied Significance to Design, Construction, or Operation

Welds made without the proper procedure could result in improperly made welds in critical areas.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 200 and 201

ATS No: RV-84-A-030

Characterization

The PG&E nondestructive examination (NDE) weld inspection reports are inconsistent with Foley inspection reports and/or the NDE reports were changed by Foley without the approval of the PG&E inspection team.

Implied Significance to Design, Construction or Operation

The allegation implies that the NDE inspection results may be compromised due to record falsification. This might allow uninspected or defective welds to exist in a safety-related structures.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff has determined these allegations involved no issues of safety or management significance.

Staff Position

These allegations are resolved.

Action Required

None.

24.

Task: Allegation or Concern No. 219

ATS No: RV-84-A-045

Characterization

Construction work on the PAM-2 panel in Unit 2 was transferred from HP Foley to PG&E. It is alleged that this action was contrary to procedures and was done to bypass Quality Control inspections.

Implied Significance to Design, Construction or Operation

Bypass of procedures in this case could result in inoperability of this portion of the Post-Accident Monitoring System when called upon to operate and could indicate the possibility of a more general failure to fully implement the Diablo Canyon QC program.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 222

ATS No.: RV-84-A-002

Characterization

The use of the FLUD computer code for subcompartment analyses at the Diablo Canyon Plant is inappropriate. (Allegation 1472 is the same and Allegations 1545, 1687, 1688 and 1689 are related).

Implied Significance to Plant Design, Construction, or Operation

The use of an inappropriate computer code or application of an appropriate computer code outside its limitations can generate unreasonable results such as low subcompartment pressures and temperatures that are used as a bases for design or equipment qualification.

Assessment of Safety Significance

The failure of safety systems or components following a postulated pipe break can impair mitigating actions taken to safely shutdown the reactor. To preclude such failures due to underdesign on the basis of incorrectly calculated subcompartment temperatures and pressures these conditions are calculated conservatively.

Staff Position

The alleger in a letter of March 1984 stated that for the Diablo Canyon Nuclear Plant, several engineering calculations were performed with the BECHTEL developed FLUD computer code. This code computes the pressure and temperature rise in the various subcompartments of the auxiliary building as a result of a postulated rupture of a high energy pipe. The allegation states that the code has no algorithm to simulate gas diffusion between compartments and has a possible accumulative error in the equation of state under some narrow range of pressure and temperature. The allegation further states that when the code is used for a reasonably long duration after the break it sometimes generates results that are very unreasonable.

The same allegation was again raised in a subsequent letter in August 1984 (Allegation 1472). In Exhibit 9 to the submittal by the Government Accountability Project (GAP) of November 15, 1984 a number of issues were raised regarding the adequacy and applicability of the FLUD computer code, including the specific concerns of Allegations 222 and 1472 for the neglect of gas diffusion simulation between subcompartments. The staff evaluation and resolution of the concerns, identified as Allegation 1545, were included in SSER-28 (April 1985). Similar concerns were raised in Exhibit 7 to the GAP submittal of March 14, 1985. PG&E addressed these concerns in a letter of June 13, 1985 (DCL-85-212) and the staff evaluation is included in this report under Allegations 1687, 1688 and 1689.

On May 9, 1984, NRR staff in Bethesda and OI staff in Walnut Creek, contacted the alleger to obtain a better understanding of the concern raised in Allegation 222. On May 11, 1984, the staff contacted the BECHTEL Power Corporation to obtain their views concerning the allegation.

Based on the above discussions, the staff found that the expressed concern is valid in flow regimes beyond the applicable range of the flow models incorporated into the FLUD code. FLUD is intended to be used for forced flow conditions while the concerns address situations that are important only for free convective flow conditions. This finding is based on the following rationale.

The use of subcompartment codes such as FLUD is intended to solve problems for which a significant pressure difference can develop between a compartment receiving the mass/energy input and downstream compartments (i.e., forced flow condition). The calculated results of the FLUD code that are questioned in this allegation, appear to be those calculated when the pressure difference between compartments approaches zero (i.e., free convective flow). For these conditions, the maximum differential pressures have already occurred and have been conservatively calculated by a computer code like FLUD. The addition of an algorithm to simulate gas diffusion between compartments, would represent a misapplication of the code. As stated earlier, the flow regime in question does not produce significant loads on structures and components. Pressure loads, which are important to safety, occur early in the transient when the FLUD code can conservatively be applied. Secondly, if the free convective flow regime were of interest, additional flow models would also be required in addition to such second order effects as gas diffusion.

Based on the above rationale, the staff concludes that the FLUD code, with respect to the expressed concern, continues to be an acceptable tool for calculating the design pressure differential between compartments. It is not different from other codes used by the NRC and the industry since it is based on the current state-of-the-art for forced flow models. Therefore, the staff concludes that the allegation has no safety significance for the Diablo Canyon Plant since it does not affect the calculation of the design pressure loads and does not result in any safety margin degradation. Allegations 222 and 1472 are resolved.

Action Required

None.

Task: Allegation or Concern No. 378

ATS No: RV-84-A-062

Characterization

A QC inspector alleged that he was never provided with support to perform his duties, nor was he provided with proper training.

Implied Significance to Design, Construction, or Operation

An improperly trained QC inspector would be less capable of identifying inadequate processes, procedures or materials used on safety-related systems. Deficiencies of this nature could affect the system's ability to perform its intended safety function.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 416

ATS No: RV-84-A-062

Characterization

Inconsistent weld acceptance standards were used by day and night shift inspectors inspecting structural steel welds for the Guy F. Atkinson Company.

Implied Significance to Design, Construction or Operation

Inconsistent standards could have resulted in unacceptable welds being accepted. This could cause structural steel welds to fail under abnormal loads if weld strength is less than assumed by the design.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 572

ATS No: RV-84-A-052

Characterization

PG&E has stifled Pullman Power Products (PPP) inspector's reports of faulty Bosten-Bergen and American Bridge Welds, by directing them not to issue discrepancy reports.

Implied Significance to Design, Construction, or Operation

Faulty welds in components received from vendors, if uncorrected, could possibly result in failure of safety-related systems.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 597

ATS No.: RV-84-A-046

Characterization

Management failed to issue controlled documents for engineers to use in sample calculations. Allegation 597 is similar to Allegation 79, previously addressed in SSER-21 and SSER-26.

Implied Significance to Plant Design, Construction, or Operation

Without uniform design bases the adequacy of piping and pipe support design cannot be verified and assured.

Assessment of Safety Significance

This allegation does not represent a new issue. The concern was previously addressed at Allegation 79.

Staff Position

The issue as stated in this and related allegations (e.g. Allegation 79) was considered by the staff during its review and evaluation of the PG&E efforts for piping and pipe supports as related to the license condition in the Unit 1 low-power license (Order to Modify License, April 18, 1984). The results of the staff's effort are documented in SSER-25 for Unit 1 and SSER-30 for Unit 2. PG&E addressed the issue of document control in a letter of February 7, 1984 (DCL-84-046) and in affidavits, dated March 5, 1984, on the subject of design quality assurance (see also PG&E letter DCL-84-123 of March 29, 1984). PG&E acknowledged that during the early part of the onsite reevaluation effort of small bore pipe supports by the Onsite Project Engineering Group (OPEG) there were insufficient copies of controlled documents available due to the rapid buildup of OPEG personnel. Additional controlled documents were distributed in February 1983 and in April 1983 all controlled copies were replaced by a complete reissue of new controlled copies of the design documents. PG&E stated that there is no requirement for every support engineer to have an individual copy. During its audits the staff inspected the relevant design documents and determined that they were properly controlled in accordance with the applicable QA procedures in place at that time. Based on the information provided by PG&E, based on its evaluation of Allegation 79 as reported in SSER-21 and based on its efforts associated with the piping and pipe support evaluation as reported in SSER-25 and SSER-30 the staff concludes the issue raised in Allegation 597 is resolved.

Action Required

None.

Task: Allegation or Concern No. 608

ATS No.: RV-84-A-052

Characterization

Design drawing exaggerated the load ratings of U-bolts up to four times their rating. The concern raised in Allegation 608 is the same as previously identified in Allegation 85 and others.

Implied Significance to Plant Design, Construction, or Operation

U-bolts are used for supporting safety related piping required for safe shutdown of the plant. Failure of U-bolts potentially could lead to the failure of the piping.

Assessment of Safety Significance

This allegation does not present a new issue. See at Allegation 85 in SSER-22 (March 1984).

Staff Position

The staff position as stated at Allegation 85 in SSER-22 applies equally to Allegation 608. The staff considers this allegation resolved.

Action Required

None.

Task: Allegation or Concern No. 624

ATS No: RV-84-A-052

Characterization

PG&E officials failed to correct a false statement to the NRC that the Company was ignorant of inaccuracies in the plant manual for operators.

Implied Significance to Design, Construction, or Operation

Uncorrected errors in the plant manual could provide misleading information to plant operators which could impact correct plant operations.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 675

ATS No.: RV-84-A-057

Characterization

PG&E response to NRC on small bore piping analysis does not contain enough information to support a conclusion. Allegation 675 is related to and similar to Allegation 88, previously addressed in SSER-22 (March 1984).

Implied Significance to Plant Design, Construction, or Operation

If insufficient information is available the NRC staff may not be able to reach the necessary conclusion regarding the adequacy and safety of small bore pipe supports.

Assessment of Safety Significance

In a meeting on December 15, 1983 the NRC staff had requested additional information regarding support gaps in thermal piping calculations. The information was provided by PG&E in a letter by December 28, 1983. The staff evaluation of support gaps is presented in SSER-22 (March 1984) at Allegation 88, Part 2. Allegation 675, which was included as Item 257 in a submittal by the Government Accountability Project (GAP), dated March 2, 1984 states that the information in the PG&E December letter was inadequate. At the staff's request, PG&E addressed this concern in a letter of April 30, 1984 (DCL-84-166). The staff reviewed the information and found it acceptable. Furthermore, the subject of thermal gaps was included as a license condition (2.C.(11), Item 4) in the Unit 1 low power license in April 1984. The staff evaluation of the PG&E efforts on this matter is included in SSER-25 (July 1984).

Staff Position

Based on the staff review of its evaluation of Allegation 88 (SSER-22) and of the PG&E effort regarding the license condition on thermal gaps (SSER-25) the staff concludes that Allegation 675 is resolved.

Action Required

None.

Task: Allegation or Concern No. 676

ATS No.: RV-04-A-057

Characterization

Conclusions by PG&E in the January 27, 1984 response to NRC on expansion anchors are based on incomplete, inconsistent data.

Implied Significance to Plant Design, Construction, or Operation

The allegation states that the safety factors cited by PG&E in its response of January 27, 1984 (DCL-84-031) are not sufficient to account for the Hosgri or Double Design Earthquake (DDE) seismic events. Failure of the anchor bolts could render a system inoperable.

Assessment of Safety Significance

Each of the three earthquake loadings (i.e. DE, DDE and Hosgri) has a complete set of conditions included with the loading. These conditions are described in the load combination equations and the accompanying allowable stresses. This grouping of loads and allowable stresses or loads is documented in various NRC documents and applicable industry standards and codes.

The particular document cited by the alleger states that the "factor of safety of at least 3 has been maintained between demand and capacity for Hosgri and DDE level loads".

Staff Position

On the basis of its review of the provisions as described in PG&E letter DCL-84-031, dated January 27, 1984 the staff concludes the design parameters associated with the anchor bolts are satisfactory. The staff considers the allegation resolved.

Action Required

None.

Task: Allegation or Concern No. 718

ATS No: RV-84-A-062

Characterization

Instructional documents on weld symbology were not distributed as claimed by PG&E.

Implied Significance to Plant Design, Construction or Operation

This GAP rebuttal implies PG&E has made false statements concerning distribution of weld symbol handouts and clarity of memos concerning weld symbology interpretation.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-01 and 50-323/85-03 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 789

ATS No: RV-84-A-064

Characterization

Welded extension bars at the 119 level in Unit 2 were inspected and bought off, but did not meet specifications or drawing requirements.

Implied Significance to Design, Construction or Operation

Welded extensions for decking supports not meeting specifications or drawings may present a safety hazard due to failure upon loading.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 813, 838, 839, and 840

ATS No.: RV-84-A-064

Characterization

These allegations were previously addressed in SSER-28.

The alleger states that the plant is built on stream bed where granite was predicted (turbine building, west side) (Allegation 813). In addition, the alleger states that in mid-1979 three caisson holes, 65 to 85 feet deep, near the center of the turbine building, were drilled into sandstone rather than into the granite that was supposed to be there (Allegation 838).

The alleger also states that the bedrock used for anchoring the turbine pedestals is so fractured that diesel oil from leaking tanks was found in the veins of the rock (Allegation 839). Moreover, the alleger states that the bedrock on which the plant is founded is not solid, and in many instances anchoring cables pulled out of the rock and the cables lost their tension (Allegation 840).

Allegation 390 also raised a concern regarding the anchoring of the turbine pedestals.

As stated in SSER-28, a single response to these four allegations is being given because the concerns expressed have a common link, the foundation adequacy of the turbine building.

Implied Significance to Plant Design, Construction, or Operation

See SSER-28 at Allegation 813.

Assessment of Safety Significance

See SSER-28 at Allegation 813.

Staff Position

In SSER-28 the staff determined, on the basis of its review, that portions of the four allegations were incorrect. Although other portions did identify problems that developed during plant construction, these difficulties were appropriately addressed and acceptably resolved. The staff concluded that PG&E must provide proper documentation on the installation of the rock anchoring system for staff review.

The staff has reviewed additional information that was provided by PG&E in a letter dated March 26, 1985 (DCL-85-127). In addition, the staff and its consultants conducted an audit in May 1985 of design calculation and installation procedures associated with the buttress caissons and pedestal rock anchors of the turbine building. Based on the additional information provided and the audit, the staff concludes that the as-built pedestal rock anchors and buttress caissons are acceptable and no further evaluation is required.

Action Required

None.

Task: Allegation or Concern No. 833

ATS No: RV-84-A-064

Characterization

A welder disregarded the ISO drawing, field installation instructions, process sheet instructions, weld rod requisition instructions and then incorporated his own welding procedure.

Implied Significance to Design, Construction or Operation

The failure of a welder to weld in accordance with instructions and a qualified weld procedure could result in a defective pipe weld and the inability of a safety-related pipe system to perform its intended function.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 838, 839, and 840

ATS No.: RV-84-A-064

Characterization

See at Allegation 813.

Implied Significance to Plant Design, Construction, or Operation

See at Allegation 813.

Assessment of Safety Significance

See at Allegation 813.

Staff Position

See at Allegation 813.

Action Required

See at Allegation 813.

Task: Allegation or Concern No. 896

ATS No.: RV-84-A-064

Characterization

PG&E states that the cause of superseded documents being used was that engineers kept the old ones after being issued supplements. Alleger feels it was a management problem.

Implied Significance to Plant Design, Construction, or Operation

The use of improper design documents potentially could lead to the design of a system or component that would not meet its intended function. Appropriate document control procedures should be applied by management to preclude the use of superseded documents.

Assessment of Safety Significance

The design of a system or component is reviewed and approved at various levels of supervision. It is unlikely that a major design deficiency, based on the use of improper design documents, would remain undetected.

Staff Position

The allegation was made by the alleger during an NRC interview in early April 1984 at which time the NRR staff was conducting an indepth review and evaluation of the PG&E design, analysis and quality control associated with the piping and pipe support effort for Diablo Canyon Unit 1. On April 18, 1984 the Commission issued an Order to PG&E amending the Unit 1 license by a license condition which required PG&E to perform seven (7) specific tasks related to the design of piping and pipe supports. The staff audited and inspected this effort as documented in SSER-25 (July 1984). The staff determined (SSER-25, Section 9.0) among other findings, that there existed a number of programmatic deficiencies in the effectiveness of the design control measures utilized by the Onsite Project Engineering Group (OPEG), including inadequate procedures within OPEG and the use of unauthorized documents. The staff identified all of these deficiencies to PG&E and requested additional information in a letter dated June 20, 1984 to which PG&E responed by letter dated June 26, 1984 (DCL-84-238). The staff reviewed the PG&E responses, conducted an inspection and audit of records at the PG&E offices in San Francisco and at the OPEG office at the site, and discussed the matter with PG&E. This effort is documented in a NRC memorandum from R. Heishman to R. Vollmer dated September 10, 1984, which was issued a Board Notification No. 84-161 dated September 24, 1984 (see Appendix D.1). The staff concluded that the corrective actions taken by PG&E were appropriate and that the engineering procedures were adequate and were being implemented. In summary, at the time the allegation was made a number of deficiencies existed in the procedural controls of documents which subsequently were corrected. The use of outdated design documents did not result in a system or component that could not meet its design function. The staff evaluation was subsequently also included in SSER-29 (March 1985), Section 11 and in SSER-30 (April 1985), Section 1.

Action Required

None.

Task: Allegation or Concern No. 993

ATS No: RV-84-A-076

Characterization

This concern is similar to allegations 353 through 359 for field welds 197-212, concerning welding QC at Diablo Canyon. It is alleged that several college students working as QC Inspectors were unqualified. It is further alleged that weld procedure code 200 was "grossly inadequate".

Implied Significance to Design, Safety or Construction

Unqualified inspectors or inadequate weld procedures could possibly result in unsatisfactory construction of safety-related systems or components.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 995

ATS No: RV-84-A-064

Characterization

Inspection work performed under Atkinson's control in 1978 in the northwest corner roof area of the turbine building was performed by a questionable inspector.

Implied Significance to Design, Construction or Operation

An unqualified inspector could permit unsatisfactory construction work to go unrepaired resulting in structural failure.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1009

ATS No: RV-84-A-064

Characterization

An individual believes that engineers who questioned suspect assumptions were transferred to Unit 2. Cooperative engineers plus new recruits were assigned to Unit 1.

Implied Significance to Design, Construction or Operation

Assignment of engineers based upon attitudes could result in an insufficient level of experience in the groups assigned to one of the units. An inadequate experience level could result in failure to detect safety significant design or installation errors.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1062

ATS No: RV-84-A-064

Characterization

Missized or improperly installed beam clamps have been used to fasten raceway support struts to structural beams.

Implied Significance to Design, Construction or Operation

Inadequately supported safety-related raceways could result in degradation or failure of critical power, control or instrumentation circuits during events (e.g., earthquake) that cause abnormal loading of the raceway supports.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

2/17

Task: Allegation or Concern No. 1101

ATS No: RV-84-A-064

Characterization

Falsification of records - American Society for Nondestructive Testing (ASNT) Level II Magnetic Particle Test (MT) inspector restrictions were waived by a backdated signature of a Pullman Level II MT inspector who was no longer onsite.

Implied Significance to Plant Design, Construction, or Operation

The qualifications of Level II MT inspectors were compromised by falsification of records.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-01 and 50-323/85-03 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1127, 1128 and 1129

ATS No.: RV-84-A-068

Characterization

The maintenance progrom for equipment qualification was inadequately implemented. (These allegations were included in SSER-26, Table 5.6-1).

Implied Significance to Plant Design, Construction, or Operation

Inadequate maintenance may result in equipment failure which could affect safe operation of the plant.

Assessment of Safety Significance

In response to these allegations concerning the equipment qualification (EQ) maintenance and surveillance program, the staff examined, during an audit of records at the Diablo Canyon site, the EQ maintenance and surveillance program, implementation of the procedures and training of personnel. The staff found that the maintenance and surveillance procedures are sufficient in detail and have been written and implemented to address the maintenance and surveillance concerns regarding EQ. The staff talked to a journeyman in the instrumentation and control group and electrical group and found that the journeyman was properly trained and had knowledge of these procedures. PG&E installed bright orange tags on all equipment items that are qualified for a harsh environment. These tags caution craft personnel that EQ procedures must be followed during the maintenance and surveillance actions on the particular equipment.

Staff Position

Based on the above, the staff concludes that there is reasonable assurance that maintenance and surveillance actions are being taken in accordance with well established procedures. Accordingly, the staff concludes that these allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1131

ATS No.: RV-84-A-069

Characterization

The alleger states that the staff should evaluate the licensee's implementation of corrective action regarding training and notification of procedure revisions.

Implied Significance to Plant Design, Construction, or Operation

Without adequate indoctrination and training, the engineers may not effectively perform their assignments. Without uniform design bases, formulations, and acceptance criteria, the adequacy of plant system safety cannot be verified and assured. The concerns raised in this allegation are the same as those in previously raised Allegations 79, 82 and 84.

Assessment of Safety Significance

The staff assessments for Allegations 79, 82, and 84 in SSER-21 (December 1983) apply to this allegation. This allegation does not represent a new issue. PG&E addressed the specific concern raised in Allegation 1131 in a letter of June 26, 1984 (DCL-84-239).

Staff Position

The staff has concluded that hardware and design documents (e.g., training procedures and document control procedures) were inspected to determine if the measures to correct and control deficiencies in the design satisfied licensing requirements. The results of these inspections indicate that licensing requirements have been satisfied.

The staff evaluations for Allegations 79, 82 and 84, which raise the same concerns as Allegation 1131, are provided in SSER-26 and apply to this allegation. PG&G addressed the concern in a letter of June 26, 1984 (DCL-84-239). Further, as part of its piping and pipe support evaluation effort for Diablo Canyon Unit 1 in 1984 the staff also evaluated associated programmatic and quality assurance aspects. The results are documented in Board Notification 84-161, dated September 24, 1984 (see Appendix D.1).

Based on the evaluation of Allegation 1131 and review of its previous evaluation of the same concerns and issues as discussed above, the staff concludes that the allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1132

ATS No.: RV-84-A-069

Characterization

The alleger states that the licensee's response to this concern continues to ignore the cause of the problem. The allegation relates to the same general subject of training, administrative control and quality assurance measures applied by PG&E in the piping and pipe support effort.

Implied Significance to Plant Design, Construction, or Operation

Same as for Allegation 1131

Assessment of Safety Significance

The staff assessment for Allegation 1131 applies to this allegation. The allegation does not represent a new issue. PG&E addressed the specific concern raised in Allegation 1132 in a letter of June 26, 1984 (DCL-84-239).

Staff Position

The staff position as stated for Allegation 1131 applies also to Allegation 1132.

Action Required

None.

Task: Allegation or Concern No. 1166

ATS No.: RV-84-A-069

Characterization

False statement by PG&E in a letter of April 30, 1984 regarding adequacy of resolution of oversized bolt hole concerns in rupture restraints.

Implied Significance to Design, Construction, or Operation

Inadequate resolution of oversized bolt holes could result in safety concerns about the design and construction.

Assessment of Safety Significance

In response to Allegation 637 on the subject of bolt holes PG&E stated in a letter of April 30, 1984 (DCL-84-166), at Item 56, that "to the best of our knowledge, this established process of resolving each instance of an oversized bolt hole on a case-by-case basis has resulted in the resolution of all concerns involving oversized bolt holes, either by repair or by member replacement." In Allegation 1166 the alleger states that this is a false statement.

PG&E, in a letter dated June 26, 1984 (DCL-84-239), addressed Allegation 1166 and other allegations related to rupture restraints, including Allegation 1163 which also relates to oversized bolt holes. As a result of the oversized bolt holes PG&E had issued nonconformance report NCR DC1-79-RM-003 for Unit 1 in January 1979, and NCR DC2-80-RM-002 for Unit 2 in November 1980. The corrective actions for oversized bolt holes in accordance with the NCR for Unit 1 has been completed at the time this allegation was made and the NCR was resolved and closed by PG&E on October 1981. The steps taken for the NCR closure was fully documented. Corrective actions per the NCR for Unit 2 were ongoing at the time the allegation was made. The corrective actions have been completed and the NCR is resolved and closed by PG&E as of March 1985, including full documentation.

Staff Position

The corrective actions for oversized bolt holes had been completed by PG&E for Unit 1 prior to the reinstatement of the low power license in April 1984 and for Unit 2 prior to the issuance of the low power license in April 1985. Therefore, any safety concern was resolved. Regarding the alleged "false" statement by PG&E in the April 30, 1984 letter, the staff concludes that the statement was correct with regard to Unit 1 which was the unit under review and evaluation at the time. The statement was incorrect with reference to Unit 2 and was not viewed by the staff to apply to Unit 2. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1228

ATS No.: RV-84-A-071

Characterization

The alleger states that from the public record available at the NRC Public Document Room, it is not possible to determine the degree of compliance with NUREG-0737, Item II.B.3. (See also Allegation 1227.)

Implied Significance to Plant Design, Construction, or Operation

This concern pertains to the capability of the post accident sampling system to obtain certain information that could be used in determining mitigating actions to be taken following an accident.

Assessment of Safety Significance

The requirements for a post accident sampling system were identified as Item II.B.3 in NRC Report NUREG-0737. It is not a safety system. Regulatory Guide 1.97, Revision 3, characterizes the system as a Category 3 instrument, that is, as a "diagnostic and backup" system. It monitors Type E variables, the least critical category. Therefore, deficiencies in this system would have a minimal impact on public health and safety.

Staff Position

The staff has evaluated the postaccident sampling system as part of the licensing review for Diablo Canyon Units 1 and 2. The acceptability of the system was discussed in detail in SSER-31 (April 1985) and SSER-32 (July 1985). In addition, the system was the subject of a number of inspections by the Region V Office; for example, see Inspection Report Nos. 50-275/84-41 and 50-323/84-29, dated January 3, 1985 and 50-275/85-02 and 50-323/85-04 dated February 11, 1985. In SSER-32 the staff concluded (Section 10.8) that the requirements of NUREG-0737 Item II.B.3 have been met. This allegation is resolved. (See also Allegation 1227.)

Action Required

None

53

Task: Allegation or Concern No. 1229

ATS No.: RV-84-A-071

Characterization

Lack of compliance with Items II.K.3.30 and 31 of NUREG-0737 brings into question whether the plant can withstand a TMI-type accident. (This allegation was previously addressed in SSER-28; see also Allegation 1227).

Implied Significance to Plant Design, Construction, or Operation

Lack of compliance with the TMI-related requirements of NUREG-0737 could affect the plant's capability to minimize the chances or mitigate the consequences of an accident similar to the one that occurred at TMI-2.

Assessment of Safety Significance

Without exception, the consequences of a large break LOCA are analyzed to be more severe than those of a small-break LOCA. Therefore, any analysis which shows less severe consequences for the less limiting small breaks would in no way affect the LOCA safety margins which are determined by the more severe large break analysis. Therefore, this issue has no effect on the safety significance for the design basis.

Staff Position

The requirement for calculations with revised small-break LOCA methods to show compliance with 10 CFR Part 50, Appendix K was established in NUREG-0737 Item II.K.3.30 for a generic evaluation and in II.K.3.31 for plant specific applicability. The staff evaluation for Diablo Canyon was provided in SSER-10 (August 1980) and SSER-12 (March 1981). PG&E elected to participate in the Westinghouse Owner's group effort regarding II.K.3.30. A requirement for conformance and timely submittal of the result was included, as License Condition 2.c(8)o., in the Unit 1 low power license (September 22, 1981). Amendment 1 to that license, dated February 5, 1982, required that a specific implementation date be developed prior to Unit 1 fuel loading. The staff established this schedule in a letter to PG&E dated November 15, 1983, which stated that the staff was reviewing the Westinghouse generic submittal regarding Item II.K.3.30 and which required PG&E to submit its plant specific analysis regarding Item II.K.3.31 within one year of staff approval of the Westinghouse generic model. This requirement was subsequently included in the Unit 1 full power license (November 2, 1984) as License Condition 2.c(6)h. As discussed in SSER-31 (April 1985) the staff did not consider it necessary to include an equivalent license condition for Unit 2 because the Westinghouse generic effort and the PG&E Daiblo Canyon Plant specific analysis would apply to both units. In SSER-32 (July 1985) the staff stated that its evaluation of the generic submittal by Westinghouse had been completed and found acceptable (Letter C. O. Thomas (NRC) to E. P. Rahe (Westinghouse), dated May 21, 1985," Acceptance for Referencing of Licensing Topical Report WCAP 10054(P) - Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code"). The staff further stated that within one year of receiving the evaluation, PG&E is required to submit plant specific analyses with the NOTRUMP code regarding Item II.K.3.31 in accordance with the Unit 1 license condition. In accordance with Generic Letter 83-35, the plant specific compliance with II.K.3.31 may be submitted generically. the staff requires that such generic submittal include validation that the limiting break location has not shifted away from the cold legs to the hot or pump suction legs.

The allegation states, on the basis of the NRC letter to PG&E of November 15, 1983, that the NRC had given relief to PG&E regarding compliance with NUREG-0737 Items II.K.3.30 and II.K.3.31. The staff has reviewed the various actions taken regarding these items as discussed above and in particular the requirements set forth in the letter. These actions were fully consistent with the approach taken by the staff both on generic basis as well as on other plant specific cases. The staff concludes no relief was granted to PG&E.

Action Required

None.

Task: Allegation or Concern No. 1232

ATS No.: RV-84-A-071

Characterization

The alleger states that on the basis of a review of publicly available documents/records, the licensee has not submitted the leak reduction program required by NUREG-0737, Item III.D.1.1, or received NRC approval of the same. (See also Allegation 1227).

Implied Significance to Plant Design, Construction, or Operation

This allegation pertains to the ability of plant personnel to safely access certain vital areas of the plant to take mitigating actions during an accident. The allegation states that PG&E did not submit its leak reduction program prior to issuance of a fuel load license.

Assessment of Safety Significance

In the event of an accident, there is a very low probability that defects in this leak reduction program would prevent safe access of plant personnel to areas of the plant where actions are necessary to mitigate the accident. Therefore, deficiencies in this program would have a minimal impact on public health and safety.

Staff Position

The low power license (i.e., fuel load and low power operation) was issued for Unit 1 on September 22, 1981, and for Unit 2 on April 26, 1985. In letters of January 26 and March 13, 1981 PG&E submitted its program in response to the NRC requirement III.D.1.1 in NUREG-0578 (subsequently NUREG-0737), that applicants implement a program to reduce leakage from systems outside containment. The staff found that the PG&E program met the requirements and was, therefore, acceptable. The staff evaluation was provided in SSER-14 (April 1981). The requirements for a leakage reduction program from reactor coolant sources outside containment are included in the Technical Specifications, Section 6.8.4. The staff inspected the establishment and implementation of the leakage reduction program with respect to the requirements in NUREG-0737, Item III.D.1.1 for Unit 1 and Unit 2 as documented in Region V Inspection Reports No. 50-275/84-10, dated June 27, 1984; and 50-275/85-26 and 50-323/85-23, dated August 29, 1985. The staff concluded that there were no noncompliances or deviations. The staff concludes that an appropriate leakage reduction program was established and implemented in a timely manner. This allegation is resolved. (See also Allegation 1227).

Action Required

None.

Task: Allegation or Concern No. 1239

ATS No.: RV-84-A-071

Characterization

Regulatory Guide 1.143 identifies industry codes, for example ANSI B.31.1, and QC methods for determining the acceptability of welding in radwaste systems. PG&E has classified their radwaste systems as Class "E" systems and, as such, the systems are not subject to QC inspection. (See also Allegation 1227).

Implied Significance to Plant Design, Construction, or Operation

Regulatory Guide 1.143, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plant," provides guidance to reasonably assure that components and structures of the radwaste management systems are designed, constructed, installed, and tested on a level commensurate with the need to protect the health and safety of the public.

Assessment of Safety Significance

In accordance with Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water-Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants," radwaste management systems are not safety related. The Diablo Canyon Final Safety Analysis Report (FSAR), Table 3.2-4, appropriately identifies the ANSI B.31.1 Code and other codes by which the radwaste systems are designed, fabricated, erected, and tested in full compliance with the codes. Deficiencies in these systems would have a minimal impact on public health and safety.

Staff Position

The Diablo Canyon radwaste systems were reviewed and evaluated by the staff as reported in its Safety Evaluation Report (SER) issued in 1974. The systems are properly classified as Class "E" systems in accordance with Regulatory Guide 1.26 which was issued prior to 1974. Full compliance with the limited quality control provisions of Regulatory Guide 1.143 is not required since it was first issued in 1978, after the issueance of the SER.Deficiencies in these systems would have a minimal impact on public health and safety, since these systems were designed, fabricated, erected and tested in full compliance with ANSI B.31.1 and other applicable codes. (See also Allegation 1227).

Action Required

None.

Task: Allegation or Concern No. 1264

ATS No: RV-84-A-071

Characterization

PG&E response to GAP Allegation No. 259 on walkdown by personnel who marked-up drawings used by Quality Control is misleading. The people were not qualified.

Implied Significance to Design, Construction or Operation

The implied safety significance of this allegation is that the quality of safety-related systems may be compromised if they were analyzed and constructed using improper drawings.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1270

ATS No: RV-84-A-071

Characterization

PG&E response that an individual was not aware of orders to stop working on hangers is misleading. Another individual gave the stop work order, but the individual who claims to be unaware of the order should have known about it.

Implied Significance to Design, Construction or Operation

The allegation is not sufficiently detailed to allow an assessment of its significance to design, construction or operation. Generally, stop work orders are issued to hold construction while problems with design, materials or procedures are resolved so the amount of rework required is minimized. In this regard, failure to be aware of, or to comply with a stop work order, would be more likely to have economic significance than safety significance.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1380

ATS No.: RV-84-A-073

Characterization

Drawings was changed by drawing routing personnel without coordination with design staff. Allegation 34 (SSER-31, December 1983) raises a similar concern.

Implied Significance to Plant Design, Construction, or Operation

Accurate as-built drawings are required for design reconciliation of the as-constructed hardware and to provide, accurate, readily accessible information.

Assessment of Safety Significance

The changing of design drawings by unauthorized, possibly unqualified personnel, not subject to check and review could result in the use of inadequate designs not meeting their design objectives.

Staff Position

The staff inspected hardware and design drawings to determine if the measures to control and correct programmatic deficiencies satisfied licensing requirements. The results of these inspections indicate that licensing requirements have been satisfied.

The staff evaluated this concern as part of its piping and pipe support evaluation as discussed in SSER-25 (July 1984) and evaluated programmatic aspects as documented in Board Notification 84-161, dated September 24, 1984 (see Appendix D.1). Based on these evaluations the staff concludes this allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1381

ATS No: RV-84-A-073

Characterization

A nut could not be properly installed on an embedded stud that attaches a main feedwater pipe support to the containment wall. The nut was cut in half and tack welded to the base plate. This problem is described in Diablo Canyon Problem Report 1-2335-P.

Implied Significance to Design, Construction or Operation

An improperly supported feedwater pipe could result in a loss of feedwater during a transient that places abnormal loads on the support. The pipe support in question is upstream of the main feedwater check valves so that problems with this support would not impair the ability to provide auxiliary feedwater. Nevertheless, the support in question is classified as safety-related by PG&E.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

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Task: Allegation or Concern No. 1393

ATS No.: RV-84-A-073

Characterization

The alleger states that inspectors at the site do not meet the requirements of ANSI 45.2.6. The allegation concerns the ANSI 45.2.6 requirements for visual inspection of pipe hangers.

Implied Significance to Plant Design, Construction, or Operation

The qualification of inspection personnel affects the quality of the inspection.

Assessment of Safety Significance

The concerns of Allegation 1393 had previously been raised in Allegations 57, 690 and 692. This allegation does not raise a new issue.

Staff Position

The qualification of inspectors is discussed for Allegations 57 in SSER-21 (December 1983) and for Allegations 690 and 692 in SSER-26 (July 1984). Corrective action regarding training programs is discussed in Allegation 1131. Based on its previous evaluations for the same concern the staff concludes that this allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1396

ATS No.: RV-84-A-073

Characterization

The alleger states that the ability of the supporting main structure should be evaluated for the support loads reacted by that structure.

Implied Significance to Design and Operation

The main structural elements could be overloaded if the individual reactions from supports are not considered. The cumulative effect of the loads should be considered.

Assessment of Safety Significance

In January 1985 the staff audited the PG&E calculations and discussed with PG&E the design methods employed to consider all loads that could be supported by the main structural elements. PG&E submitted a response to the staff in a letter dated March 5, 1985 (DCL-85-089) which the staff has reviewed. The enclosure to the letter lists several calculations that address the evaluation of structural elements for the containment, auxiliary building, turbine building, and the intake structure. This submittal and additional discussions with PG&E on the details of how the pipe hanger loads were addressed show that all loads have been adequately evaluated.

Staff Position

Based on the submittal and discussions with PG&E the staff concludes that the individual pipe support loads on the main structure have been adequately addressed. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1397

ATS No: RV-84-A-073

Characterization

On a diesel generator fuel oil transfer system pipe support (support number 20/85R), a nut is bearing on a weld and half of a shim plate. This condition is not shown on the as-built drawings, but is shown on pipe support tolerance clarification form TC-1-11497.

Implied Significance to Design, Construction or Operation

A improperly supported pipe in the diesel fuel oil transfer system could result in eventual failure of one diesel generator following conditions (such as a seismic event) that imposed abnormal loads on the piping system.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

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Task: Allegation or Concern No. 1399

ATS No: RV-84-A-073

Characterization

Base plates of support members on the Unit 2 RHR containment sump recirculating lines to the RHR pumps have partial penetration weldments.

Implied Significance to Design, Construction or Operation

The implied safety significance is that base plates improperly welded may not support the design load.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1410

ATS No: RV-84-A-0082

Characterization

A foreman for a site contractor (H. P. Foley) allowed fire doors to be installed with cut support bolts and improperly adjusted shims; example door 345.

Implied Significance to Design, Construction, or Operation

Improper fire door installation could result in fire door failure during a fire. This could result in a fire spreading from one fire area to another. The fire, spreading to another area, could result in damage to redundant safety shutdown systems and the inability to safely shutdown the reactor.

Assessment of Safety Significance

As documented in Inspection Report 50-275/84-31, an allegation review board met on August 17, 1984, and decided upon the following course of action:

a. Examine Pyrocrete fire doors in the Unit 1 and Unit 2 areas to determine whether such doors have been accepted with cut support bolts or improperly adjusted shims. In particular, examine door number 345 and the doors installed by the Foley supervisor named in the allegation for such conditions.

b. Determine whether the inspection documentation for the doors examined in the field adequately represents the installed condition.

c. Interview the Foley carpenter foreman, to determine his knowledge of door installation criteria and his assessment of the degree of criteria compliance. Retain interview sheet documentation.

During his inspection, the inspector interviewed personnel, examined system work and inspection documentation and examined fire doors to answer the questions of the review board. Based on his examinations, the inspector observed the following:

- The inspector examined all 10 bolts in door 345. Four of these had grooves. The inspector then examined other doors installed by the named foreman. On door B15, 4 bolts were examined. On door 242, 2 bolts were examined. On door 257, 2 bolts were examined. On door 187, 3 bolts were examined. On door 143, 2 bolts were examined. On door 215, 5 bolts were examined. The only additional discrepancy was one slight groove on a bolt on door 215. No evidence of improper shim adjustment was discovered. A large number of other Unit 1 doors installed by this foreman were also examined visually for proper operation and installation with no discrepancies noted.

- The inspection documentation appeared to represent the installed condition as all doors seemed to be correctly installed with the exception of the bolts on the doors mentioned above.

- The Foley foreman is no longer employed at Diablo Canyon. Two plant engineers who are both responsible for reviewing the fire door work, both said that the foreman was very knowledgeable in the requirements and installation methods for the doors. They both stated that he also produced high quality work.

On doors other than door 345, the inspector examined a total of 18 bolts with only one having a slight groove. Based on this, door 345 would appear to be an isolated case. Due to the Foley personnel accompanying the inspector not having access to vital areas during the bolt inspection, no bolts on doors in the vital areas were initially sampled. This item of damaged bolts installed on fire doors was documented as open item (50-275/84-31-01) pending completion of a licensee sampling program of vital area doors, to determine the extent of the problem, and actions necessary to resolve identified discrepancies.

Inspection Report 50-275/85-05, documents the inspector's review of the licensee's subsequent corrective actions on inspection and replacement of the potentially damaged door anchor bolts as stated in PGandE Letter No. DCL-84-349. The actions appeared to have been done in a timely manner and were adequate to correct the potential problem.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1422

ATS No.: RV-84-A-088

Characterization

Mr. Stokes and Mr. Yin were prevented by the NRC from following through with issues. Mr. Yin's independence to fully investigate and resolve his concerns has been obstructed. (Nontechnical aspects of this concern are addressed under Allegation 1438).

Implied Significance to Design, Construction, or Operation

By preventing Yin and Stokes from investigating their concerns, potentially significant safety issues may not be evaluated and resolved.

Assessment of Safety Significance

In March, 1984, a comprehensive NRC staff review was initiated with respect to the impact piping support issues identified at Diablo Canyon should have on low power operation. This effort was carried out by a group of nine senior staff members and one consultant from BNL. Six participants had no prior personal involvement with the review of the Diablo Canyon Nuclear Power Plant. The individuals in the group were chosen on the basis of their expertise in piping and pipe support design and application of quality assurance programs in accordance with 10 CFR 50, Appendix B. During the period March 30 to April 12, 1984, the review group activities included meeting with Mr. Yin, a public meeting with the licensee, a site visit to audit examples of piping and supports at issue, a meeting with Mr. Stokes, the principal alleger on piping issues, and a public meeting with the ACRS to discuss the groups activities and conclusions.

In its report of April 12, 1984, the review group concluded that these issues did not demonstrate a generic problem with respect to a breakdown of quality assurance or design and construction effectiveness and that the piping and pipe support issues under review at Diablo Canyon should not preclude criticality and operation at low power. The group further recommended that seven requirements be imposed as a license conditions to document the actions necessary as a prerequisite of full power operation.

To verify compliance with the license condition in a comprehensive yet timely manner, the review effort was divided into nine task groups: one group to focus on each of the seven requirements, one group for matters related to the Independent Design Verification Program (IDVP), and one group for audit of programmatic QA matters.

Each task group explored to its satisfaction, compliance with its assigned requirement of the license condition, matters related to the IDVP or programmatic QA matters as appropriate, building on the information gathered during the review for low power operation. The task teams communicated with Mr. Yin in a number of instances during the course of their review. Mr. Yin's comments were considered by the task team members and were included where the team members felt appropriate.

The task teams found that there were some deficiencies in the QA programs related to design of pipe supports during the verification program. Without exception, however, review of the actual analytical work performed, review of the design control process as it actually functioned, and review of a spectrum of as-installed hardware provided compelling evidence that the design of piping and pipe supports at Diablo Canyon Unit 1 was a process that was under control and a process that yielded acceptable results. Extensive audits and inspections were performed, however, virtually no significant changes to plant hardware was found necessary. The details of the staff effort and conclusion were reported in SSER-25 (July 1984) for Unit 1. A similar effort was conducted for Unit 2 as reported in SSER-30 (April 1985).

Staff Position

Further review of seismic design adequacy of piping at Diablo Canyon Unit 1 and Unit 2 is not warranted. These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1426

ATS No.: RV-84-A-088

Characterization

The alleger states that IDVP contractors, Teledyne, and Westinghouse were not independent of PG&E control.

Implied Significance to Design, Construction, or Operation

The independence of the contractors in the Unit 1 Independent Design Verification Program (IDVP) was essential to the unbiased evaluations of the Unit 1 design. Failure to maintain independence would cast serious doubt on the findings. The IDVP was specifically instituted for Unit 1 only. The results of the program was subsequently applied by PG&E to Unit 2.

Assessment of Safety Significance

The NRC Commission Order CLI-81-30 required the independence of the IDVP contractors (Teledyne and its subcontractors) and these requirements were incorporated into the IDVP Program Plan. Westinghouse was not a participant in the IDVP. The NRC staff reviewed and approved this plan. The staff attended technical meetings, conducted audits of the work by Teledyne and its contractors and reviewed the IDVP documents that summarized the evaluations. The staff evaluation of the independence aspect is provided in SSER-18 (August 1983). The Atomic Safety and Licensing Appeal Board examined the subject of independence at hearings in November 1983 and determined that the IDVP was conducted in an independent manner.

Staff Position

The Commission, ASLAB and the NRC staff found the IDVP was conducted in an independent manner. The allegation does not have any evidence to invalidate the previous findings. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1427

ATS No.: RV-84-A-088

Characterization

The alleger states that the NRC permitted the postponement of approximately a year PG&E's compliance with some 6000 licensing commitments.

Implied Significance to Design, Construction, or Operation

Licensing commitments must be addressed in a timely manner to ensure the safe operation of the plant.

Assessment of Safety Significance

This allegation is based on a NRC staff meeting with PG&E on July 2, 1984 at which the alleger was present. A verbatim transcript of this meeting was made. The subject of discussion was a computerized management data base listing of quality commitments which allows PG&E to demonstrate continuing conformance with NRC requirements during QA audits. This data base consists of some 6000 commitments which were being tracked. The discussion did not relate to "open items."

Staff Position

The staff considers this allegation to be a misunderstanding which was clarified during the meeting. The 6000 items being tracked are PG&E commitments made during the course of the design. None of these commitments constitute an open item. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1472

ATS No.: RV-84-A-096

Characterization

Use of FLUD computer code for subcompartment analyses at the Diablo Canyon Plant is inappropriate. (Allegation 222 is the same, and Allegation 1545, 1687, 1688 and 1689 are related).

Implied Significance to Plant Design, Construction, or Operation

See Allegation 222.

Assessment of Safety Significance

See Allegation 222.

Staff Position

See Allegation 222.

Action Required

None.

Task: Allegation or Concern No. 1479

ATS No: RV-84-A-107

Characterization

Hazardous substances and radioactive materials were being disposed in ponds at the Diablo Canyon site. One of these ponds had cracks.

Implied Significance to Design, Construction or Operation

The uncontrolled release of nonradioactive hazardous substances and unmonitored radioactive materials could affect the health of the public. Additionally, if cracks developed in a pond structure which performs a safety-related function, this function could be impaired.

Assessment of Safety Significance

As discussed in Inspection Report 50-275/84-37 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1485

ATS No: RV-84-A-113

Characterization

Unistrut and Thunderbird clamps used to support hydrogen gas tubing do not provide adequate support.

Implied Significance to Design, Construction or Operation

Inadequately supported hydrogen lines would present a potential fire hazard if the lack of support resulted in line rupture under conditions that imposed abnormal loads on the tubing (e.g. turbine trip).

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

74

Task: Allegation or Concern No. 1486

ATS No: RV-84-A-113

Characterization

An individual questions the acceptability of capped off lines coming from the reactor vessel support pads.

Implied Significance to Design, Construction or Operation

Capped lines could be indicative of incomplete construction work.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1490

ATS No.: RV-84-A-113

Characterization

The use of beam clamps will not provide sufficient support for 8-inch diameter fire protection water supply piping. (Allegation 1513 through 1518 also relate to fire protection)

Implied Significance to Plant Design, Construction, or Operation

If the clamps should fail, the water supply to fire protection systems potentially could be interrupted. As a result the plant would not have an effective means of suppressing potential fires. In addition, the resulting collapse of the piping might damage safety-related equipment and prevent the plant from being safely shut down.

Assessment of Safety Significance

The fire protection water supply piping at the Diablo Canyon Nuclear Power Plant was designed and installed so as to conform with the applicable provisions of National Fire Protection Association (NFPA) Standards Nos. 13 and 14. PG&E has confirmed that the support of 8-inch diameter fire protection water piping conforms with the requirements of the National Fire Protection Association.

Staff Position

During original staff review of the fire protection water supply piping, the staff expressed concern as stated in SSER-8 (November 6, 1978) that PG&E had not demonstrated that failure of the non-seismic portions of the fire protection system will not prevent the plant from being safely shut down. In response to the staff concern PG&E committed, in a letter dated November 13, 1978, to seismically support non-seismic fire protection equipment in safety-related areas so that this equipment will remain in place after an earthquake. As stated in SSER-9 (June 1980) the staff found acceptable this remedial action as satisfying the concern.

In the event of a fire after an earthquake, the licensee will rely on the seismically qualified fire hose reel system for fire suppression. The fire hose reel system is supplied with water from a seismically qualified firewater storage tank and by seismically qualified fire pumps powered from the emergency electrical buses. The hose reel stations are located so as to ensure adequate coverage of all areas of the plant containing safety-related equipment. As discussed in SSER-8 the staff, found this system acceptable.

As part of its evaluation of the Diablo Canyon Fire Protection Program the staff evaluated the water supply piping for conformance with the requirements of NFPA Standards Nos. 13 and 14. Based on its evaluation. which included an on-site audit, the staff concluded in SSER-9 that the design of the water supply piping is acceptable. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1493

ATS No: RV-84-A-114

Characterization

Pullman used pipe welding procedures on structural steel. When the problem was identified, Pullman wrote a memo which revised the ESD to legalize the existing practice.

Implied Significance to Design, Construction or Operation

Welds made utilizing the wrong weld procedure might not be capable of sustaining the design load.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

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Task: Allegation or Concern No. 1505 and 1506

ATS No.: RV-84-A-114

Characterization

Allegations 1505 and 1506 concern the safety of 8 one-ton cylinders of chlorine stored onsite with respect to sabotage and storm driven wave damage. The allegations state that damage to the cylinders is a threat to the safe shutdown of the facility as well as to residents living downwind of the Diablo Canyon facility.

Implied Significance to Plant Design, Construction, or Operation

The Diablo Canyon reactor control room ventilation system is designed to detect chlorine gas and to isolate to preclude any danger to the safe operation of the facility. In the event of a chlorine gas release from the damaged tank(s) other employees onsite would need to be evacuated, as has been done at other reactor facilities as well as chemical plants when chlorine is accidentally released.

Assessment of Safety Significance

The NRC staff has evaluated the potential and consequences of damage of the chlorine gas cylinders due to storm waves and postulated sabotage.

The 8 one-ton chlorine cylinders are stored in an essentially open concrete structure at an elevation of 20 feet above mean seal level (MSL) on an open grating behind the front sea wall. In the event of a severe storm, they would be susceptible to damage from flooding, or splash runup. The closest air intake for the control room is about 1200 feet (366 meter) from the chlorine tanks at an elevation of 200 feet (61 meter) MSL.

At low wind velocities a release of chlorine gas from the tanks, which is approximately twice the density of air, would tend to flow to lower elevations toward the surface of the ocean, and away from the control room for the Diablo Canyon Nuclear Plant. The shoreline in the vicinity of the plant is rough and precipitous, and the land below the mean high water line can only be occupied with great difficulty. The irregular coastline consists of numerous coves which will tend to cause additional diffusion not included in the following chlorine release analysis. Review of U.S. Geological Survey topographical maps of the Diablo Canyon area indicates steep hills rising to over 1000 feet in the vicinity of the plant site. These hills will reduce the dispersion of the dense gas in a landward direction. In addition, there are no highly traveled highways or residential areas within several miles of the plant site. Any gas which would blow over land under high wind velocity (storm) conditions would not adversely affect members of the general public. The closest residence is 1-3/4 miles (2815 meters) north-northwest of the site, and located at an elevation of about 350 feet MSL. This location is about 1/2 mile inland with respect to the coastline. Wind data from onsite measurements indicate the prevailing wind is from the northwest and west-northwest directions. Therefore, normally a chlorine release from the site would not reach this inhabited area.

The nearest community is Avila Beach approximately 8 miles (12.8 kilometers) downwind from the reactor site in the prevailing wind direction. Under storm conditions in which wave action would reach the elevation of the chlorine tanks, the wind velocity would be in the neighborhood of 42 miles per hour (19 meters per second). The Pasquill diffusion condition classification under this storm situation would be "Class D". Using these meteorological parameters, the concentration of chlorine at the 800 meter plant exclusion area boundary downwind would range from 8.7* to 1.0 ppm for 20 minutes for the airborne release of one ton of chlorine. At the closest residence, the concentration would range from 1.4 to 1.0 ppm for 50 seconds. These estimates are conservative in that splashing and potential submerging of the tanks under sea water would tend to absorb the chlorine and reduce the fraction released to the atmosphere.

In more stable meteorological conditions, and a low wind velocity, a rupture of a chlorine tank would release the heavier-than-air gas at the 20 feet elevation. This gas would tend to drop to the elevation of the water level and flow along the coastline, becoming less concentrated as the distance increases. Calculations by the staff for Pasquill "Class G", a wind velocity of 1 meter per second, and a meander factor of 6 indicate that the chlorine plume concentration at the 800 meter exclusion area distance would exceed 25 ppm for 30 minutes. At the closest residence, the concentration would be above 25 ppm for about 3 minutes. Due to the prevailing wind and topography, this is a conservative value. The gas would be undetectable at Avila Beach.

The staff finds that there is a potential that the chlorine tanks could become dislodged from their supports and be damaged as a result of heavy wave action with a subsequent release of chlorine into the open environment. However, the associated meteorological conditions would be extremely unstable, different from those discussed above, and would result in the immediate dispersion of any chlorine released.

In accordance with the plant emergency procedures emergency breathing equipment and protective clothing are located at the intake structure for the safe evacuation of personnel. The emergency procedures also require alerting of plant personnel in potentially affected areas and of the onsite emergency response organization. In addition, public agencies offsite must be notified and provided with an assessment in the event of a chlorine release.

In regard to a chlorine release as a result of sabotage, the NRC security regulations as stated in 10 CFR 73.55 do not provide for the application of special protective measures to equipment that is not required for the safe operation or shutdown of the reactor. If sabotage actions against non-safety related equipment or material could result in a site hazard, not possible through accidents or environmental conditions for which a plant already provides protection, then certain additional precautions might be necessary.

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*The NIOSH/OSHA Pocket Guide to Chemical Hazards published by the U.S. Department of Health, Education and Welfare and the U.S. Department of Labor states that the permissible exposure limit for chlorine is 1 ppm. The "Immediately Dangerous to Life or Health" (IDLH) level for chlorine is 25 ppm.

During its review and evaluation of the Final Safety Analysis Report (FSAR) the staff examined the matter of accidental release of chlorine gas from the onsite sources and concluded that the chlorine protective devices and the provisions for control room habitability were acceptable (SER, October 1974 and SSER-9, June 1980). Since there is no difference in this instance between the effects from an accidental or sabotage induced release, the protective measures as discussed above are correspondingly acceptable for either event.

Staff Position

The Diablo Canyon facility was evaluated by the NRC staff during the operating license review for the consequences of a chlorine tank failure. The control room has chlorine gas detectors in the air intake to detect and isolate in the event of a chlorine release, and the control room operators have access to self-contained breathing apparatus. In view of these provisions, the control room meets the NRC General Design Criterion 19. Hence, if chlorine is released, either by natural forces, industrial accidents, or by willful acts of man, the reactor control room is protected from this toxic gas. The staff has evaluated the concentrations of chlorine gas offsite for both stable and unstable meteorological conditions. Calculations based on conservative assumptions and stable meteorological conditions indicate that for a postulated release the chlorine concentration could exceed the 25 ppm IDLH level for 30 minutes at the 800 meter exclusion area boundary and for 3 minutes at the 2815 meters distance to the closest residence. Damage of the cylinders and subsequent release of chlorine due to heavy wave activity would be associated with extremely unstable meteorological conditions resulting in the immediate dispersion of the gas. Appropriate emergency procedures for protection of plant personnel and notification of offsite agencies are in place. Based on its evaluation of these allegations, including discussions with PG&E, the staff concludes that these allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1513

ATS No.: RV-84-A-114

Characterization

Water flow tests have not been conducted on the fire protection water distribution system.

Implied Significance to Plant Design, Construction, or Operation

If water flow tests were not conducted on the fire protection water distribution system there would not be reasonable assurance that the underground fire water mains are free of obstruction or that the distribution system is capable of supplying the required quantity of water at sufficient pressure to supply sprinkler systems and fire hose stations. Allegations 1514 through 1518 also relate to the subject of fire protection.

Assessment of Safety Significance

By letter dated February 22, 1985, (DCL-85-075) the licensee confirmed that fire protection water flow tests are conducted at the Diablo Canyon Nuclear Power Plant in conjunction with system acceptance testing and as part of plant surveillance testing in accordance with the Technical Specifications. In addition, fire water flow tests of the type referred to in the allegation are conducted as part of Surveillance Test Procedure (STP) M-71. These tests conform to the guidance presented in the National Fire Protection Association (NFPA) Handbook, 14th edition and NFPA Standard No. 13.

Staff Position

The NRC Branch Technical Position APCSB 9.5.1, Sections C.2 and C.3 of Appendix A, establishes that NFPA Standards Nos. 13, 14, 20, and 24 should be used in the design, installation and testing of fire protection water supply systems, sprinkler systems, and standpipe and hose systems. In Supplement Nos. 8 and 9 to the Diablo Canyon Safety Evaluation Report (SER), the NRC staff concluded that these systems conform to the NRC fire protection guidelines and were, therefore acceptable. The staff also has approved the Diablo Canyon Technical Specifications concerning testing of fire protection systems. The staff, therefore, concludes that on the bases of its original safety evaluation and the approved Technical Specifications, the fire protection water distribution systems have been and are being tested in a satisfactory manner. This allegation is resolved. (See also at Allegations 1516, 1517 and 1518).

Action Required

None.

Task: Allegation or Concern Nos. 1514 and 1515

ATS No.: RV-84-A-114

Characterization

The water storage capacity for fire protection is inadequate and the water distribution piping for standpipe outlets is not large enough to accommodate the quantity of water required for fire fighting. The municipal supply cannot be relied on in case of an earthquake.

Implied Significance to Plant Design, Construction, or Operation

If the water storage capacity or pipe sizes were inadequate or unreliable, a sufficient quantity of water may not be available to suppress a fire, if one should occur. Allegation 1513 and 1516 through 1518 also relate to the subject of fire protection.

Assessment of Safety Significance

By letter dated February 22, 1985 (DCL-85-075), the licensee confirmed that the water supply for fire fighting includes a 4.5 million gallon reservoir and a 300,000 gallon fire water tank. This supply exceeds the guidelines contained in Appendix A of the NRC Branch Technical Position (BTP) APCSB 9.5-1. The 300,000 gallon fire water tank, the two 1500 gpm fire pumps and the distribution piping have been seismically qualified. Therefore, in the event of a seismic event with concurrent plant fire(s) this seismically qualified system would be available to supply hose lines off of the plant standpipe system and fire hydrants. The staff evaluation of the acceptability of this system can be found in Supplements Nos. 8 and 9 of the Diablo Canyon Safety Evaluation Report.

Contrary to what is stated in the allegation, the municipal water system is not interconnected with the plant fire water distribution system. Damage to the municipal water system during a seismic event would therefore have no adverse effect on the ability to fight fires at the Diablo Canyon Nuclear Power Plant.

With regard to the size of the fire protection piping, PG&E confirmed in the February 22, 1985 letter that the size of the water supply pipes to the standpipe and hose stations meets or exceeds the requirements of National Fire Protection Association (NFPA) Standard No. 14.

Staff Position

The staff has reviewed the information supplied by PG&E pertaining to these allegations and conclude that this information confirms that the fire water distribution system conforms with the staff fire protection guidelines as delineated in Appendix A to BTP APCSB.

The Staff Positions for Allegation 1513 and Allegations 1516, 1517 and 1518 also relate to Allegations 1514 and 1515.

Action Required

None.

Task: Allegation or Concern Nos. 1516, 1517, 1518

ATS No.: RV-84-A-114

Characterization:

The fire water distribution system piping is not designed and installed in accordance with NFPA Standard No. 13 with regard to pipe supports and clearances between piping and concrete penetrations.

Implied Significance to Plant Design, Construction, and Operation

If the fire water piping is not designed in accordance with NFPA Standard No. 13, the piping may be rendered inoperable due to support failure or stresses produced by building movement. Allegations 1513 through 1515 also relate to the subject of fire protection.

Assessment of Safety Significance

By letter dated April 9, 1985, (DCL-85-144) PG&E confirmed that certain fire protection piping is supported in accordance with ANSI Standard B.31.1 and the Hosgri Seismic Criteria. PG&E has concluded that, on the basis of a comparative analysis, these criteria meet or exceed the requirements of National Fire Protection Association (NFPA) Standards Nos. 13 and 14. The remaining fire protection piping supports have been designed in accordance with the requirements of NFPA 13. PG&E has conducted a walkdown of the piping to confirm that these requirements have been met.

With regard to the clearances between piping and concrete at penetrations, PG&E has conducted a pipe stress analysis to verify the integrity of the piping. This is in accordance with Section 1-2 of NFPA Standard No. 13. On the basis of this analysis, PG&E has concluded that the recommended clearances are not necessary.

Staff Position

The NRC Branch Technical Position APCSB 9.5-1, Sections C.2 and C.3 of Appendix A, establishes that NFPA Standards Nos. 13, 14, 20, and 24 should be used in the design and installation of fire protection water supply systems, sprinkler systems, and standpipe and hose systems.

The staff has reviewed the fire protection program and fire hazards analysis submitted by PG&E. As part of the review, the staff visited the plant site to examine the relationship of safety-related components, systems, and structures in specific plant areas to both combustible materials and to associated fire detection and suppression systems. The overall objective of the staff review of the fire protection program was to ensure that, in the event of a fire at the facility, the units would be able to safely shut-down and remain in a safe shutdown condition. The staff review included an evaluation of the automatic and manually operated water fire suppression systems. Based on its evaluation, the staff concluded in Supplements Nos. 8 and 9 to the Staff Safety Evaluation

Report (SSER) that the sprinkler and standpipe systems conformed with the NRC protection guidelines and are therefore, acceptable. These allegations are resolved.

The staff positions for Allegations 1513 through 1515 also relate to these Allegations.

Action Required

None.

Task: Allegation or Concern No. 1523 and 1524

ATS No.: RV-84-A-114

Characterization

Several lines in the hydrogen gas system were supported by electrical conduit clamps that are not designed for such purpose. PG&E management would not take corrective action on the problem of the inadequate support clamps on hydrogen system lines.

Implied Significance to Plant Design, Construction, or Operation

Failure of supports for piping of the hydrogen gas system could potentially lead to the failure of the piping itself and result in the release of hydrogen into adjacent areas. This would be a fire hazard.

Assessment of Safety Significance

The hydrogen system is not a safety related system required for reactor protection, containment isolation or engineered safety features. Hydrogen is used at Diablo Canyon for cooling of the turbine generators and for the purging and initial fill of the volume control tank. In areas containing equipment required for safe shutdown the hydrogen system is enclosed in guard pipes and enclosures such that if a release should occur the hydrogen is vented into areas not containing equipment for safe shutdown.

Staff Position

At the request of the staff PG&E provided information and addressed the concern of Allegations 1523 and 1524 in a letter of April 9, 1984 (DCL-85-144). The staff evaluated the concern and reviewed the information provided by PG&E in an Allegation Board Meeting and concluded that PG&E adequately addressed the technical issues and did take the appropriate action by conducting a walkdown of the hydrogen system. It was determined that "unistrut" clamps were used on two lines of one half inch size. PG&E determined that the clamp rating of 250 lbs. is more than adequate to accommodate anticipated load combinations.

The allegation also stated that a hydrogen fire occurred at the San Onofre nuclear power plant which killed workers. The staff inquired from Southern California Edison, the licensee for the San Onofre plant, regarding this alleged event. The staff was informed that no such event and/or fatalities did occur.

The staff concludes that Allegation 1523 and 1524 are resolved.

Action Required

None.

Task: Allegation or Concern No. 1543

ATS No: RV-84-A-114

Characterization

An individual feels that PG&E made false statements that led to the resolution of previous allegations regarding welder qualification test surveillance. Specifically, the existence of welder qualification records referenced by a J. P. Watson affidavit presented before the Atomic Safety and Licensing Appeal Board is questioned.

Implied Significance to Design, Construction or Operation

Lack of adequate welder qualification test records would impair the traceability of weld quality for any welds made by welders lacking adequate qualification records, invalidating the acceptance of these welds. As a result, some of the accepted welds might fail under abnormal loading conditions because they lack the structural strength assumed by the design.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1566 and 1567

ATS No: RV-84-A-115

Characterization

Welders worked without shielding gas flow meters and used incompatible meters.

Implied Significance to Design, Construction or Operation

Welds made without shielding gas flow rate information or inaccurate information could possibly result in oxidized weldments, with lower mechanical and physical properties of the base material, thus not meeting the original design criteria.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-27 and 50-323/85-24 (Appendix B to this SSER), the staff determined these allegations involved no issues of safety or management significance.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1647

ATS No.: RV-84-A-117

Characterization

The alleger states that the civil structures to which pipe supports are attached may not be properly analyzed for torsional loads.

Implied Significance to Design, Construction, or Operation

The civil structures should be designed to account for all applied and induced secondary loads. Failure to do so could overstress the members and prevent them from performing their intended function.

Assessment of Safety Significance

The staff has evaluated this concern as part of its structure audit process. The subject of torsion in structural members in the containment annulus structure is addressed in SSER-29 (March 1985), Sections 4.2.6 and 4.2.8. The staff, as a result of its audits requested additional information which was provided by PG&E in a letter of January 18, 1985 (DCL-85-017), including procedures used to evaluate the pipe support reaction loads. PG&E also addressed the concern raised in the allegation in letters of January 11 and 29, 1985 (DCL-85-010 and DCL-85-026).

Staff Position

Based on its evaluation of the allegation, previous staff evaluations on the same subject and its review of information provided by PG&E, the staff concludes that the subject of torsion in civil structures has been adequately addressed. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1649 and 1654

ATS No: RV-84-A-122

Characterization

Promatec installation of seals in crane wall (inside containment) and auxiliary building penetrations was not satisfactory since the seals are being "faced off" with material which does not have traceability.

Implied Significance to Plant Design, Construction or Operation

The subject penetration seals perform one or all of the following functions: 1) radiation shielding, 2) hydrostatic/air sealing and 3) fire barrier sealing. Unsatisfactory penetration seals could result in increased personnel radiation exposure or unanticipated damage to safety-related equipment (as a result of fires or steam line breaks).

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-01 and 50-323/85-03; and 50-275/85-39 and 50-323/85-37 (Appendix B to this SSER), the staff determined these allegations involved no issues of safety or management significance.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1650

ATS No: RV-84-A-122

Characterization

High density lead elastomer (HDLE) material, used in penetration seals (see Allegation or Concern No. 1649), had material expiration dates which were exceeded.

Implied Significance to Plant Design, Construction or Operation

Same as Allegation or Concern No. 1649.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-01 and 50-323/85-03 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1651

ATS No: RV-84-A-122

Characterization

Catalist and accelerator materials, used in penetration seals (see Allegation or Concern No. 1649), were used onsite even though this material had passed its expiration date.

Implied Significance to Plant Design, Construction or Operation

Same as Allegation or Concern No. 1649.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-01 and 50-323/85-03 (Appendix B to this SSER), the staff determined this allegation involved no issues of safety or management significance.

Staff Position

This allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1652 and 1653

ATS No: RV-84-A-122

Characterization

Installation, inspection and testing of seals in crane wall (inside containment) and auxiliary building penetrations were performed by personnel who were not properly trained. Indoctrination records were falsified.

Implied Significance to Plant Design, Construction or Operation

Same as Allegation or Concern No. 1649.

Assessment of Safety Significance

As described in Inspection Report Nos. 50-275/85-08 and 50-323/85-09 (Appendix B to this SSER), the licensee held additional conversations with the concerned individual in response to a Hot-Line concern, as documented in Quality Concern Summary Report-110. The individual indicated that he did not intend to imply that training records were falsified but that training of Promatec installation, inspection and testing personnel was not adequate.

The licensee's findings from their review of the individual's concern concurred that further onsite training and indoctrination of Promatec craft personnel was necessary. Accordingly, all Promatec personnel were directed to attend QA orientation classes. Additionally, specific instruction in procedures, regulations, methods, responsibilities, and personnel interfacing, as applicable, was provided to Promatec personnel. The staff reviewed records to verify adequate attendance at this training.

The licensee's review also determined that Promatec QC personnel were well trained and knowledgeable. The staff established, from a review of the Promatec procedures, that QC hold points were required to be implemented. The staff determined the licensee verified QC hold point inspections had been performed as specified in the seal installation process. Therefore, assurance is provided that previously installed penetration seals were satisfactory.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1654

ATS No: RV-84-A-122

Characterization

See Allegation 1649.

Implied Significance to Plant Design, Construction, or Operation

See Allegation 1649.

Assessment of Safety Significance

See Allegation 1649.

Staff Position

See Allegation 1649.

Action Required

None.

Task: Allegation or Concern No. 1664

ATS No: RV-85-A-999

Characterization

See Allegation 1673 through 1677.

Implied Significance to Plant Design, Construction, or Operation

See Allegation 1673 through 1677.

Assessment of Safety Significance

See Allegation 1673 through 1677.

Staff Position

See Allegation 1673 through 1677.

Action Required

None.

Task: Allegation or Concern Nos. 1665, 1666 and 1667

ATS No: RV-85-A-999

Characterization

1665 - Pullman's Vendor Quality system audit program for Cardinal is in nonconformance to ASME Section III, NCA-3820, a, b, and c (1980 Edition) and 10 CFR 50 Appendix B Criteria VII - Control of Purchased Material, Equipment, and Services.

1666 - Cardinal appeared to not have a quality system program covering heat treating of material during 1981.

1667 - Pullman Power Products' Vendor Quality system audit of Cardinal did not address heat treating of material as required.

Implied Significance to Plant Design, Construction or Operation

Incorrect or nonexistent heat treatment of Cardinal material purchased for the Diablo Canyon Nuclear Plant may result in the quality of the material to be indeterminate, thus resulting in an inability of safety systems to perform their intended safety functions.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-16, 50-323/85-16, 50-275/85-39 and 50-323/85-37 (Appendix B to this SSER), the staff determined these allegations involved no issues of safety or management significance as Cardinal did not heat treat material but, rather, contracted for this service.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1668

ATS No: RV-85-A-999

Characterization

See Allegations 1673 through 1677.

Implied Significance to Plant Design, Construction, or Operation

See Allegations 1673 through 1677.

Assessment of Safety Significance

See Allegations 1673 through 1677.

Staff Position

See Allegations 1673 through 1677.

Action Required

None.

Task: Allegation or Concern Nos. 1669, 1670, 1671, and 1672

ATS No: RV-85-A-999

Characterization

1669 - Pullman's 1981 audit of Cardinal did not audit major portions of the quality system program, as required.

1670 - Pullman's 1981 audit of Cardinal did not audit to see if nondestructive examinations (NDE) were performed in accordance with approved procedures.

1671 - Pullman's Vendor Quality System Audit failed to check Cardinal employees who performed functions within the scope of ASME Section III to determine if they were qualified to perform their duties in 1981.

1672 - Pullman's Vendor Quality System Audit did not contain a listing, and no audit was performed, to determine if the person or department responsible for defining and implementing the overall effectiveness of the quality program reported regularly on the effectiveness of the program.

Implied Significance to Plant Design, Construction or Operation

The overall effectiveness of the quality assurance program needs to be reported to ensure material, procedural, and operational requirements are met on a continuing basis.

Cardinal employees who perform functions within the scope of ASME Section III, should be qualified to perform those functions. NDEs need to be performed in accordance with approved procedures.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-16 and 50-323/85-16 (Appendix B to this SSER), the staff determined these allegations involved no issues of safety or management significance.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1664, 1668, 1673, 1674, 1675, 1676 and 1677

ATS No: RV-85-A-999

Characterization

1664 - Cardinal materials' quality is indeterminate for material purchased prior to January 9, 1984.

1668 - PG&E conveniently ignored findings on Cardinal's QA program until well after any licensing impact.

1673 - PG&E QA instructions do not specifically provide for a system of identification, documentation and segregation of all Cardinal materials previously purchased and installed by Pullman in the plant. This practice does not conform to 10 CFR 50, Appendix B, Criteria XV and XVI.

1674 - Failure by PG&E/Pullman's DR#9173 to address/identify, document and segregate all Cardinal materials previously purchased and installed by Pullman in the plant is a significant condition adverse to quality.

1675 - PG&E does not provide a system of identification, documentation and segregation of Cardinal materials previously purchased and installed by Pullman in the plant. This represents nonconformance to 10 CFR 50, Appendix B, Criteria XV and XVI.

1676 - Pullman DR#9173 only provides for a system of identification and documentation for material, manufactured by Cardinal, which was in Pullman's warehouse/storage areas.

1677 - Pullman Power Products' Discrepancy Report #9173 (12-21-84) does not provide for a system of identification, documentation, segregation and disposition of Cardinal materials previously purchased and installed by Pullman in both units of the Diablo Canyon Nuclear Plant. This is a nonconformance to 10 CFR 50 Appendix B Criteria XV - Nonconforming Materials, Parts or Components and Criteria XVI - Corrective Action.

Implied Significance to Design, Construction or Operation

Pullman has purchased and installed Cardinal bolts and fasteners at the Diablo Canyon Nuclear Plant since 1977. Since Cardinal's past Quality Assurance Program has been identified by the NRC and PG&E to have significant deficiencies making the quality of their material indeterminate, this material could result in an inability of safety systems to perform their intended safety functions.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-16, 50-323/85-16, 50-275/85-39 and 50-323/85-37 (Appendix B to this SSER), the staff determined the allegations involved no issues of safety or management significance.

Staff Position

These allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1684

ATS No.: RV-85-A-999

Characterization

Modifications were made to Unit 1 pipe supports without assessing the impact from prior modifications on the same pipe support.

Implied Significance to Plant Design, Construction, or Operation

Modifications to pipe supports which did not receive engineering review and approval, potentially could result in supports not capable of performing their intended function.

Assessment of Safety Significance

When modifications were to be made to pipe supports a draftsman would receive instructions to prepare a revision to the support drawing. It would occasionally happen that a draftsman would receive instructions to make an additional revision to the same support drawing before the as-built dimensions of a previous revision were incorporated. Procedures required that after support drawings were revised to incorporate as-built dimensions, the drawing be forwarded to PG&E for as-built engineering approval. If more than one modification was made to a support at approximately the same time, each drawing revision would not receive separate engineering approval. However, no matter how many modifications were made, the impacts from all such modifications would be assessed prior to approval of the final as-built drawing by PG&E.

Staff Position

PG&E provided its evaluation of the concern expressed in this allegation in a letter dated June 13, 1985 (DCL-85-212). During its evaluation of the PG&E piping and pipe support effort in 1984 for Unit 1 the staff also evaluated the PG&E program to review and approve final pipe support configurations and documentation. This program was found acceptable as described in SSER-25 (July 1984). The results of the staff effort for a similar program for Unit 2 are documented in SSER-30 (April 1985). Based on its evaluation of the allegation and consideration of the earlier evaluation related to the subject the staff concludes that this issue is resolved.

Action Required

None.

Task: Allegation or Concern No. 1685

ATS No.: RV-85-A-999

Characterization

Isometric drawings were used as the primary vehicle for engineering review and analyses but did not reflect all the changes recorded on as-built drawings.

Implied Significance to Plant Design, Construction, or Operation

Engineering review which did not consider the actual as-built configurations could result in unsafe plant hardware.

Assessment of Safety Significance

The first step in the overall review and approval process for piping isometric drawings involved completion and as-built acceptance of all supports affecting a given isometric drawing. This acceptance included the support itself and all supporting documentation for each support. The next step consisted of taking the isometric drawing into the field and walking down the whole system to verify that the isometric accurately reflected as-built conditions and to correct for oversights and errors. This walkdown isometric was then submitted for PG&E approval. Final engineering review of the piping system was based upon isometric drawings that reflected actual as-built conditions.

Staff Position

PG&E provided its evaluation of the concern expressed in this allegation in a letter dated June 13, 1985. The staff considered these aspects during its evaluation of the PG&E piping and pipe support effort for Unit 1 and Unit 2 as discussed in SSER-25 (July 1984) and SSER-30 (April 1985) respectively. Based on its review of the allegation, its evaluation of the PG&E response and its earlier evaluations, the staff concludes that this allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1687, 1688 and 1689

ATS No.: RV-85-A-999

Characterization

The alleger states that the FLUD computer model used by PG&E to establish environments in subcompartments following postulated high energy pipe breaks outside containment may have an error in the time step which could cause an HVAC engineer to significantly underdesign a ventilation system for the environment resulting from an actual pipe break. This may result in an HVAC system failure which could result in failure of instrumentation and control equipment. Related allegations are Allegations 222, 1472, and 1545.

Implied Significance to Plant Design, Construction, or Operation

Incorrectly defined pressure/temperature profiles for various subcompartments could mean that safety related equipment designed to function in these environments or to assure function of other essential equipment in them could not do so. If the newly determined environments were significantly different from those previously defined, safety-related equipment would require redesign or requalification.

Assessment of Safety Significance

The staff previously has reviewed and evaluated the PG&E program, including use of the FLUD computer code, for establishing equipment qualification envelops as part of its review and evaluation of the Independent Design Verification Program (IDVP) for Diablo Canyon Unit 1. The results are presented in SSER-18 (August 1983). That evaluation included an independent calculation of the pressure/temperature profile for selected subcompartments outside containment utilizing the COBREE computer code. PG&E addressed the allegations in a letter of June 13, 1985 (DCL-85-212). The COBREE model is based on the state-of-the-art methodologies for analyses for this type and has been benchmarked against actual test results to confirm its accuracy. The results of this comparison showed good correlation between the FLUD and COBREE calculated room pressures and temperatures.

Staff Position

On the basis of the above, the staff concludes that PG&E has utilized an acceptable methodology for determining subcompartment environments resulting from postulated pipe breaks outside containment. Therefore, the concerns expressed in these allegations do not alter the staff's earlier conclusion regarding the safety of the plant in this regard. These allegations are resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1691

ATS NO.: RV-85-A-999

Characterization

Engineering calculations by off-site consultant(s) contained an unacceptable high rate of mistakes because of heavy emphasis on production quotas.

Implied Significance to Plant Design, Construction, or Operation

Errors or mistakes in engineering calculations may lead to an underestimation of stresses and exceedance of stress allowables, and an underestimation of pipe support loads. Allegation 1702 is related to this concern.

Assessment of Safety Significance

The quality of piping analyses performed by off-site consultants was evaluated by the Independent Design Verification Program (IDVP). This effort was reviewed by an NRC Task Group, in response to concerns raised by an NRC inspector. The IDVF evaluation by the off-site consultant's work and the type of errors found in this work, was accepted by the NRC Task Group as described in SSER-25 (July 1984), Appendix A, Section 8. No unacceptable high rate of mistakes was found. PG&E responded to this allegation in a letter of June 13, 1985 (DCL-85-212).

Staff Position

Based on the staff evaluation of this allegation and the staff evaluation presented in SSER-25 the staff concludes that this allegation is resolved. (See also at Allegation 1702 in this report).

Action Required

None.

Task: Allegation or Concern No. 1692

ATS No.: RV-85-A-999

Characterization

A wrong formula was used for calculating stresses in welds attaching baseplates to structural steel when subjected to torsional or twisting loads.

Implied Significance to Plant Design, Construction, or Operation

Miscalculation of weld stresses could result in overstressing of welds beyond code limits and possible weld failure.

Assessment of Safety Significance

The safety evaluation of welds in general was addressed previously in SSER-28 in the resolution of Allegation 1644. PG&E addressed this concern in a letter of June 13, 1985 (DCL-85-212). This letter supports the findings of prior staff audits performed in the resolution of the Unit 1 License Condition 2.C.(11), Item 1, as documented in SSER-25.

Staff Position

Based on its evaluation of the allegation and consideration of previous staff evaluations the staff concludes that the allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1693

ATS No.: RV-85-A-999

Characterization

In using the STRUDL computer program there was much confusion regarding the orientation of the principal axis of beam elements.

Implied Significance to Plant Design, Construction, or Operation

Specification of the incorrect orientation of principal axes in the structural analysis may lead to underestimation of the bending stresses.

Assessment of Safety Significance

This issue was reviewed and assessed by an NRC Review Group during audits at PG&E offices and at the Diablo Canyon site. In response to staff concerns PG&E issued Instruction I-58, Rev. 0, "Instruction for Determining the Angle BETA," dated May 5, 1984. PG&E addressed the concern of this allegation in a letter of June 13, 1985 (DCL-85-212).

Staff Position

The staff has evaluated Instruction I-58, Rev. 0, and its implementation during its review of small bore computer calculations with respect to the Unit 1 License Condition 2.C.(11), Item 1. This has been found acceptable and is described in SSER-25 (July 1984), Appendix A, Section 1. Based on its evaluation as documented in SSER-25 and based on its review of the information provided by PG&E the staff concludes that this allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1694, 1695 and 1696

ATS No.: RV-85-A-999

Characterization

These three allegations state that the STRUDL computer program was improperly applied in the design of pipe supports and baseplates, despite knowledge of inaccuracies in the program.

Implied Significance to Plant Design, Construction, or Operation

The load carrying capacity of pipe supports may have been overestimated leading to high piping stresses.

Assessment of Safety Significance

Safety issues related to the quality and application of the STRUDL computer program in the design of pipe supports were evaluated by the staff during its effort on piping and pipe supports in 1984 with respect to the requirements of the Unit 1 License Condition 2.C.(11), Items 1 and 7.

Staff Position

The resolution of the issues raised in the three allegations is addressed implicitly in SSER-25 (July 1984), Sections 1 and 7. In addition, PG&E addressed these concerns further in a letter dated June 13, 1985 (DCL-85-212). Based on its evalution of these allegations, its previous evaluation of the matter as reported in SSER-25, and the additional information provided by PG&E the staff concludes that these allegations are resolved.

Action Required

None.

Task: Allegation or Concern No. 1697

ATS No.: RV-85-A-999

Characterization

The use of Hilti expansion concrete anchors in areas subjected to vibratory or shock loads is inappropriate.

Implied Significance to Plant Design, Construction, or Operation

Supports of piping which are anchored to concrete with expansions anchors may fail under normal operating vibratory loading or under seismically induced vibratory loading.

Assessment of Safety Significance

The allegation is based on Research Report No. 2156 of the International Congress of Building Officials. Some of the results of this report pertaining to cyclic loading of Hilti expansion concrete anchors were described in the paper "Strength of Concrete Expansion Anchors for Pipe Supports," ASME PVP40, 1980. PG&E addressed the concern raised in the allegation in a letter dated June 13, 1985 (DCL-85-212). The NRC requirements for the use of expansion concrete anchors under static, seismic and cyclic loading are stated in IE Bulletin 79-02, issued in 1979. PG&E responded to the Bulletin by letters dated June 11, 1982; February 18, 1983; and February 4, 1985 (DCL-85-050).

Staff Position

Research Report No. 2156 cited in the allegation states that anchors may be used under vibratory or shock loads if their adequacy is determined by tests. This adequacy is demonstrated in the references cited above. The staff has evaluated the allegation with respect to the NRC requirements and taking into consideration the information provided in the cited references. The staff has concluded that there is no basis for this allegation. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1698

ATS No.: RV-85-A-999

Characterization

The M-9 design guide mistakenly permits stress allowables which are higher than yield, for supports designed on an elastic basis.

Implied Significance to Plant Design, Construction, or Operation

The load carrying capacity of pipe supports may be overestimated leading to high piping stresses.

Assessment of Safety Significance

The staff has reviewed the relevant section of the PG&E Design Criteria Memorandum No. 9 (DCM-9), "Guidelines for Design of Class I Pipe Supports," Rev. 10 and 11, and the response by PG&E to this allegation in a letter of June 13, 1985 (DCL-85-212). DCM M-9 permits allowables which exceed yield, for faulted conditions, for portions of supports which fall within the jurisdiction of the ANSI B31.1 Piping Code. The basis for these allowables is the ASME B&PV Code, Section III, Subsection NF. This code permits elastic analysis of components and supports when stresses exceed yield under faulted conditions and prescribes criteria for such analyses. The allowables in DCM-9 are based on these criteria. PG&E has addressed the concern raised in the allegation in a letter dated June 13, 1985 (DCL-85-212).

Staff Position

The staff has evaluated the allegation with respect to the requirements of DCM-9 and the applicable codes, taking also into consideration the information provided by PG&E. Based on the evaluation the staff concludes that there is no basis for this allegation. This allegation is resolved.

Action Required

None.

Task: Allegation or Concern No. 1699

ATS No.: RV-85-A-999

Characterization

M-9 design guide errors could result in pipe supports being underdesigned to only withstand 89 percent of the stresses from a Hosgri earthquake because of incorrectly calculated allowable stresses.

Implied Significance to Plant Design, Construction, or Operation

See Allegation 1698.

Assessment of Safety Significance

See Allegation 1698.

Staff Position

The allegation questions the stress allowable in bending under faulted conditions for those members of pipe supports which fall within the ANSI B31.1 jurisdiction. The yield stress is 89 percent of this allowable, or conversely, the allowable stress in bending is 1.12 times the yield stress which is equal to or less than 0.70 times the ultimate stress. Performing an elastic analysis subject to this allowable stress is acceptable in accordance with the ASME B&PV Code, Section III. Based on its evaluation the staff concludes that the allegation is without a basis and is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1700 and 1701

ATS No.: RV-85-A-999

Characterization

Off-site consultants worked to uncontrolled documents on a generic basis. There was considerable confusion by off-site consultants as to the Diablo Canyon Project Office (DCPO) standards for acceptable calculations. A similar concern was raised as Allegation 896.

Implied Significance to Plant Design, Construction, or Operation

Piping and pipe supports may have been designed to incorrect criteria or by incorrect methodology.

Assessment of Safety Significance

In early 1984 as part of its piping and pipe support evaluation for Diablo Canyon Unit 1 the staff inspected PG&E practices for the control of PG&E doucments used by contractors in the design. The results are documented in the NRC Inspection Report No. 050-275/84-08, dated July 23, 1984. PG&E addressed those allegations in a letter dated June 13, 1985 (DCL-85-212).

Staff Position

Based on the NRC inspection report and the responses by PG&E, the staff has determined that there is no basis to these allegations and they are resolved. A similar concern is addressed under Allegation 896.

Action Required

None.

Task: Allegation or Concern No. 1702

ATS No.: RV-84-A-999

Characterization

Calculation packages had quotas imposed on the number of packages processed daily by personnel at off-site consultant(s) that could have overridden quality concerns. A similar concern was raised at Allegation 1691.

Implied Significance to Plant Design, Construction, or Operation

Excessive production pressure in the form of unreasonably high quotas for performing calculations can impact the quality of the calculations, potentially resulting in incorrect results.

Assessment of Safety Significance

The quality concern raised in Allegation 1702 is addressed at Allegation 1691 in this report. PG&E addressed the matter of production pressure and quotas in a letter of June 13, 1985 (DCL-85-212).

Staff Position

As stated at Allegation 1691 in this report and as reported in SSER-25 the staff has reviewed the quality aspects of piping analyses performed by off-site consultants. The staff also reviewed the PG&E response regarding production pressure and quotas. At an Allegation Board Meeting on March 13, 1986 the staff concluded that appropriate quality controls had been implemented prior to the final PG&E approval of the calculations. The staff concludes this allegation is resolved.

Action Required

None.

Task: Allegation or Concern Nos. 1703, 1704 and 1705

ATS No.: RV-85-A-999

Characterization

The three allegations raise concerns regarding work performed by PG&E consultants. Personnel at off-site consultants often assumed their responsibilities for extended periods prior to receiving any quality assurance indoctrination. Quality assurance surveillance and auditing activities were inadequate. (See also Allegations 1700 and 1701)

Implied Significance to Plant Design, Construction, or Operation

Piping and pipe supports may have been designed to incorrect criteria or by incorrect methodology.

Assessment of Safety Significance

The staff reviewed the responses by PG&E in the letter of June 13, 1985, and the pertinent portions of the NRC investigation/inspection report "USNRC RV Report No. 050-275/84-08," dated July 23, 1984. (See Allegations 1700 and 1701)

Staff Position

Based on the NRC inspection report and the responses by PG&E, the staff has determined that there is no basis to these allegations and they are resolved. (See Allegations 1700 and 1701)

Action Required

None.

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Task: Allegation or Concern Nos. 1707

ATS No.: RV-85-A-999

Characterization

PG&E falsely stated that the American Institute of Steel Construction (AISC) has endorsed the analysis of Australian papers that appear to support the use of structural steel angles.

Implied Significance to Plant Design, Construction, or Operation

Allowable bending loads of unbraced angle members may have been overestimated, or the allowable unbraced length of certain angle members may have been exceeded for a given allowable stress level.

Assessment of Safety Significance

The staff reviewed the subject papers and has also contacted the AISC regarding the specifications for angle members. In addition, the staff reviewed the response of PG&E to this allegation in a letter of June 13, 1985 (DCL-85-212), which states that publication in the AISC Journal amounts to a tacit endorsement.

Staff Position

The staff has been advised by the AISC that the relevant section of the AISC Manual of Steel Construction is not applicable to bending of angle members. The staff has reviewed the Australian technical papers and has found the relevant portions with modifications acceptable. The staff does not consider that the material in these papers has been endorsed by the AISC merely by being published in the AISC Journal. The staff does not consider the PG&E statement as "false" but a different opinion with which the staff does not agree. From a safety and licensing point of view this allegation is irrelevant, and is resolved.

Action Required

None.

Task: Allegation or Concern No. 1715

ATS No: RV-85-A-013

Characterization

Security personnel at Diablo Canyon were not themselves being properly searched prior to being granted access to the main protected area.

Implied Significance to Plant Design, Construction or Operation

If not properly searched, security personnel could bring unauthorized contraband into the protected area which could be used to adversely impact plant operations.

Assessment of Safety Significance

The concerned individual, interviewed on March 5, 1985, expressed concern that security personnel were not themselves being properly searched prior to being granted access to the protected area. He was aware of certain relief granted to PG&E by the NRC in the interest of safety. That relief recognizes the nature of security guards' duties and the fact that they are required to carry a loaded weapon. The concerned individual had initially contended to the resident inspector on February 28, 1985, that the licensee's practice went beyond the allowed relief. This contention could not be substantiated despite numerous observations at various times by different members of the inspection team during a preoperational security inspection on March 4-15, 1985. The specific limitations of the authorized relief and the results of the team's observations were discussed with licensee management and separately with the alleger on March 7, 1985 by the Safeguards Section Chief, M. D. Schuster.

Although no transgressions had been observed, the licensee indicated they intended to prepare an instruction for the benefit of both security and operations management which would clearly delineate the extent of the NRC authorized relief.

Staff Position

This allegation is resolved.

Action Required

None.

116

Task: Allegation or Concern Nos. 1720 and 1721

ATS No: RV-85-A-046

Characterization

An alleger asserts that PG&E never thought about seeing if Hilti Kwik Bolts were installed properly, and stated that he found bolts welded to the backside of base plates. The alleger goes on to describe a situation on hanger 50-123R wherein hanger 50-123R had anchor bolts that were not properly installed, i.e., a stud with a bolt on either end of the base plate was installed with concrete chipped out to allow for the bolt and stud on the bottom. The alleger also asserts that he found sabotage issues in this situation which PG&E never addressed.

Implied Significance to Design, Construction or Operations

The allegation implies that improper installation techniques of anchor bolts for base plates could result in hanger configurations that do not satisfy design requirements for safety-related functions.

Assessment of Safety Significance

The licensee had previously identified, in March of 1976, hanger anchor bolt discrepancies. Region V was aware of the situation and followed the licensee's resolution of the anchor bolting issue. The Region's involvement was documented in NRC Inspection Report Nos. 50-275/76-14, 77-03, 77-11 and 50-323/76-05, 77-01, 77-03, 77-06, 77-08 and 77-11. In addition, NRC Inspection Report No. 50-275/77-17 documents NRC findings related to a situation wherein an alleger asserted that anchor bolts had been cut short or omitted to avoid drilling rebar or resetting the hangers or racks. Further, the NRC closely followed the licensee's actions to address the issues of IE Bulletin 79-02 and documented the findings in NRC Inspection Report No. 50-275/80-18.

The inspector reviewed the documentation on the hanger 50-123R construction in addition to observing non-destructive examination of the bolt length to verify embedment depth.

Initial construction of hanger 50-123R was accepted on August 6, 1976. The first modification documented in the work package on the subject hanger showed that a reinspection program on shell type anchors resulted in the installation of two additional stud type anchors in accordance with Pullman Power Products Quality Assurance Instruction Number 98, Revision II. This work was completed and accepted on July 19, 1977. The next modification was accepted on August 17, 1979, and removed clamps for rupture restraint work, however, it did not involve work on the anchors or studs. The next work, that was completed on January 7, 1981, consisted of rupture restraint work and installation of leveling shims rather than nuts to respond to NRC Inspection and Enforcement Bulletin 79-02. The last work package included chipping of grout to inspect the stud type anchor. This inspection damaged the studs and required replacement that was completed and accepted on April 14, 1983. This review of construction documentation on this hanger showed that quality related controls and verifications were performed as required. The review did not disclose any evidence to indicate that any anchors or studs were ever found improperly installed.

To provide added assurance that the studs were properly installed, the inspector requested the licensee to perform ultrasonic (UT) measurements of the stud lengths. The inspector observed these measurements on July 31, 1985. The UT device was calibrated using a standard block and was also verified with bolts similar to those installed in the hanger. The measurements showed that the bolts were full length as specified by the installation requirements. The UT device was then verified to still be calibrated with both the standard block and the bolts that were similar to those installed on the hanger.

The staff concludes that the licensee had considered whether anchor bolts were installed properly and had conducted significant verifications to provide such assurance.

The work documentation for hanger 50-123R showed that all steps were complied with in accordance with quality control and assurance procedures. While the UT test did not verify that the anchor bolts were installed with an anchor or shell, it did verify that the bolt lengths were as specified. Based on the visual inspection and UT tests, the staff believe that the bolts were properly installed in anchors or shell. The staff concludes that there was no indication of sabotage. The allegations were not substantiated.

Staff Position

These allegations are resolved.

Action Required

None.

118

Task: Allegation or Concern No. 1726

ATS No: RV-85-A-0056

Characterization

Failure of an individual to follow established procedures entering a Radiological Controlled Area (RCA) on May 7, 1985.

Implied Significance to Design, Construction or Operation

Entering an RCA without adhering to the proper procedures could result in unnecessary and uncontrolled radiation exposure to the individual and/or the spread of radioactive contamination.

Assessment of Safety Significance

As discussed in Inspection Report Nos. 50-275/85-35 and 50-323/85-33 (Appendix B to this SSER), the staff determined this allegation to be an isolated incident of minor safety significance, did not appear to be a willful act, and prompt corrective action was taken by the licensee.

Staff Position

This allegation is resolved.

Action Required

None.

APPENDIX B

REGION V INSPECTION REPORTS

Page

1. 50-275/84-37; 50-323/84-24* B.1-1
letter Region V to PG&E, dated November 21, 1984

Allegations: 1479

2. 50-275/85-01; 50-323/85-03* B.2-1
letter Region V to PG&E, dated March 22, 1985

Allegations: 718, 1101, 1649, 1650, 1651, 1654

3. 50-275/85-08; 50-323/85-09* B.3-1
letter Region V to PG&E, dated April 24, 1985

Allegations: 152, 1652, 1653

4. 50-275/85-16; 50-323/85-16 B.4-1
letter Region V to PG&E, dated May 8, 1985

Allegations: 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677

5. 50-275/85-27; 50-323/85-24 B.5-1
letter Region V to PG&E, dated July 19, 1985

Allegations: 169, 200, 201, 219, 378, 416, 624, 789, 883, 995, 1062, 1264, 1270, 1381, 1397, 1486, 1543, 1566, 1567

6. 50-275/85-33; 50-323/85-31* B.6-1
letter Region V to PG&E, dated November 18, 1985

Allegations: 1726

7. 50-275/85-35; 50-323/85-33* B.7-1
letter Region V to PG&E, dated November 26, 1985

Allegations: 572, 993, 1009, 1399, 1485, 1493

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*Enclosed Inspection Report includes only the allegation related matter.

Page

8. 50-275/85-39; 50-323/85-37* B.8-1
letter Region V to PG&E, dated January 7, 1986

Allegations: 1664, 1665, 1666, 1667, 1668, 1669,
1670, 1671, 1672, 1673, 1674, 1675,
1676, 1677

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*Enclosed Inspection Report includes only the allegation related matter.

NOV 21 1984

Docket Nos. 50-275
50-323

Pacific Gas and Electric Company
77 Beale Street
Room 1435 San Francisco, California 94106

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation

Gentlemen:

Subject: NRC Inspection - Diablo Canyon Units 1 and 2

This refers to the routine inspection conducted by Mr. E. M. Garcia of this office on October 29 through November 2, 1984 of activities authorized by NRC License Nos. DPR-76, DPR-80, and Construction Permit No. CPPR-69 and to the discussion of our findings held by Mr. Garcia with Mr. Patterson and other members of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

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Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

Original signed by
E. A. Wenslawski

F. A. Wenslawski, Chief
Emergency Preparedness and
Radiological Protection Branch

Enclosure:
Inspection Report
Nos. 50-275/84-37
50-323/84-24

cc w/enclosure:
S. D. Skidmore, PG&E
R. C. Thornberry, Plant Manager (Diablo Canyon)
Dick Vollmer, NRR
P. A. Crane, Jr., Attorney, PG&E
C. M. Seward, PG&E
R. Weinberg, News Services
State of CA (Johnson)

bcc: RSB/Document Control Desk (RIDS)
Mr. J. Martin
Resident Inspector

EVG		
E. GARCIA	G. YUHAS	F. WENSLAWSKI
11/21/84	11/21/84	11/21/84

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/84-37, 50-323/84-24

Docket Nos. 50-275, 50-323

License Nos. DPR-76, DPR-80, and CPPR-69

Licensee: Pacific Gas and Electric Company
77 Beale Street
Room 1435
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: San Luis Obispo County, California

Inspection conducted: October 29 through November 2, 1984

Inspectors: E. M. Garcia 11/21/84
E. M. Garcia, Radiation Specialist — Date Signed

Approved by: 11/21/84
G. P. Yuhas, Chief, Facilities Radiological Protection Section — Date Signed

Summary:

Inspection on October 29 - November 2, 1984 (Report Nos. 50-275/84-37 and 50-323/84-24)

Areas Inspected: Routine unannounced inspection by a regionally based inspector including organization and staffing of the Chemistry and Radiation Protection Department; Unit 1 startup tests; Unit 2 preoperational tests, radiation monitor calibrations, and implementation of NUREG 0737, Items II.B.3 and II.F.1; and followup on allegation RV-84-A-0107. This inspection involved 39 hours on site by one inspector.

Results: Of the four areas inspected no violations or deviations were identified.

meet the commitment to Item II.F.1 attachment 3, Containment High Range Radiation Monitor. As with the other monitors discussed in this section these monitors have been "signed off" by the preoperational test staff, but not yet accepted by NPO. (50-323/83-26-01, Open)

No violations or deviations were identified in this area.

5. Allegation RV-84-A-0107

An individual, previously employed by a licensee contractor, contacted the NRC to express concern regarding the disposal of hazardous materials. For purpose of clarity this individual will be refered to as Mr. A.

Mr. A informed the NRC that he had been told by another person that there were cracks at the bottom of a pond at the site, and that material, contaminated with lead and mercury, had been removed from this pond and disposed of in a landfill.

Mr. A stated that he was also aware that the licensee was putting water contaminated with boron and slight amounts of radioactive materials in another pond on site.

Three areas of potential safety significance related to this allegation are:

a. Is the licensee improperly disposing of nonradioactive hazardous materials?

b. If the cracks in question are located in a pond that serves a safety function, has the structural integrity of this pond been effected such that the pond may not fulfill is intended function?

c. Is the licensee releasing radioactive materials to the environment by an unmonitored uncontrolled pathway?

Mr. A was informed that the first area was outside the purview of the NRC. Mr. A was also informed that the concern was brought to the attention of the State of California, Water Resources Control Board by the NRC.

The second area was examined by the senior resident inspector. It was determined that the only "ponds" that serve a safety function are the raw water reservoirs. Technical Specification 3.7.9.1b requires that the raw water reservoirs contain a minimum usable volume of 270,000 gallons of water for fire suppression. These reservoirs are cut from bed rock and are lined with a plastic liner 80 mils thick. The surveillance requirement associated with this Technical Specification requires that the water supply volume be verified at least once every seven days. The resident inspectors have periodically noted that the required volume was being maintained. Since license DPR-76 was originally issued, there have not been any reports of instances where the available volume was below that required. There has not been any reports of cracks in the structure of the reservoirs. The liners have required repairs due to shrinking with age, but this shrinkage has not effected the ability of the resorvoirs to fulfill their function.

The fact that these reservoirs are build on bedrock, that they are lined, that they have not been reported as suffering cracks, and that they have maintained the required water level indicate that this possible concern is unfounded.

The third area was examined during the inspection. Through conversations with the resident inspector and the licensee staff, review of site maps, and tours of the site, those structures that could be described as "ponds" were identified. Five "ponds" were identified and these are: the east and west raw water reservoirs, the clarifier blowdown pond, the waste holding pond, and the cement batch plant mud pond. Water samples from the first four "ponds" were collected, and are being analysed for radioactive materials by the NRC. The batch plant mud pond contains only waste concrete. Results do not identify any radioactive materials above the lower limit of detection of the NRC's gamma spectrometer. For Cesium-137 this value is calculated at 1.5E-8 microcuries per milliliter. Analysis for tritium and beta emitters are being performed. The results of these analysis will be noted in a latter report. (50-275/84-37-02, Open)

The inspector also examined the licensee's program for monitoring normally uncontaminated release paths. Figure 3 denotes the paths for unmonitored or uncontrolled releases that were identified by the licensee as part of their response to IE Bulletin 80-10, "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment". This figure also notes the scheduled frequency and type of analysis that are performed on these systems. Records of analysis of the east and west raw water reservoirs, and the waste holding pond were examined. The period reviewed is from initial criticality, April 29, 1984 to the week of the inspection. No radioactive materials above natural background were identified. The licensee also performs gamma spectrum analysis of the content of the waste holding pond before these nonradiological hazardous wastes are shipped to an approved disposal site. The inspector examined the analysis performed on May 31, 1984, and noted that no radionuclides were detected. Based on this review it does not appear that the licensee is releasing radioactive materials to the environment by an unmonitored uncontrolled pathway.

The inspector did note that the licensee's internal response to the IE Bulletin had not included a formal analysis of potential releases from the storm drains system. At the exit interview the licensee committed to evaluate and document the potential for radioactive releases through this pathway and that this evaluation would include a preliminary plan of actions to be taken when plant conditions, such as the contamination of the auxiliary boiler, make the storm drains a credible release pathway. (50-275/84-37-02)

No violations or deviations were identified in this area.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

MAR 22 1985

Docket Nos. 50-275 and 50-323

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation

Gentlemen:

Subject: NRC Inspection of Diablo Canyon Units 1 and 2

This refers to a routine inspection, conducted by Messrs. M. M. Mendonca, M. L. Padovan, T. M. Ross, and T. J. Polich, of this office during the period of January 6, 1985, through February 16, 1985. This inspection examined your activities as authorized by NRC License No. DPR-80, and Construction Permit No. CPPR-69. Discussions of our findings were held with Mr. R. C. Thornberry, and other members of your staff, at the conclusion of the inspection.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors. No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790 (a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

/s/

D. F. Kirsch, Acting Director
Division of Reactor Safety
and Projects

Enclosure:
Inspection Report
Nos. 50-275/85-01
50-323/85-03

cc w/enclosure:
S. D. Skidmore, PG&E
P. A. Crane, Jr., PG&E
R. C. Thornberry, PG&E (Diablo Canyon)
D. A. Taggert, PG&E (Diablo Canyon)
R. Weinberg, PG&E (Diablo Canyon)
State of CA

bcc:
RSB/Document Control Desk (RIDS)
Mr. J. Martin
Resident Inspector

RV						
MMendonca:dh	MPadovan	TRoss	TPolich	RDodds	AChaffee	DKirsch
3/20/85	3/20/85	3/20/85	3/20/85	3/20/85	3/22/85	3/22/85

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos: 50-275/85-01 and 50-323/85-03

Docket Nos: 50-275 and 50-323

License No: DPR-80 Construction Permit No.: CPPR-69

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: January 6 - February 16, 1985

Inspectors: R T Dodds for 3/20/85
M. M. Mendonca, Sr. Resident Inspector Date Signed

R T Dodds for 3/20/85
M. L. Padovan, Resident Inspector Date Signed

R T Dodds for 3/20/85
T. M. Ross, Resident Inspector Date Signed

R T Dodds for 3/20/85
T. J. Polich, Resident Inspector Date Signed

Approved by: R T Dodds 3/20/85
R. T. Dodds, Chief, Reactor Projects Section 1 Date Signed

Summary:

Inspection from January 6, 1985 through February 16, 1985
(Report Nos. 50-275/85-01 and 50-323/85-03)

Areas Inspected: Routine inspection of plant operations, conditions, and events; preoperational test program; startup test program; independent inspection; and followup of open items, allegations, and LERs.

This inspection effort required 245 inspector-hours for Unit 1, and 201 inspector hours for Unit 2 by four resident inspectors.

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and components. The inspector reviewed the requirements and commitments of 10 CFR 50.59, ANSI N18.7-1976, FSAR Chapter 17, and TS chapter 6 as they relate to test control. It appears the licensee presently meets the minimum program requirements.

The licensee has recently issued a procedure which covers not only changes to test and experiments, but also changes to the facility and to procedures that require a 10 CFR 50.59 Safety Evaluation. This procedure when fully implemented will provide added assurance the licensee's commitments and regulatory requirements are met.

The licensee's General Office issued Nuclear Power Generation Department Procedure NPG-5.14, "10 CFR 50.59 Safety Evaluation Guidelines," approved 11/26/84. This procedure establishes the licensee's position on the types of proposed changes, tests or experiments that require a written Safety Evaluation as specified in 10 CFR 50.59, and guidelines for identifying those changes requiring such a Safety Evaluation. The Plant Staff Review Committee (PSRC) has agreed to implement this procedure on-site within a month. The PSRC's implementation of this procedure will be followed as a part of the routine inspection program.

No violations or deviations were identified.

8. Allegation Followup

Task: Allegation or Concern No. 1101

ATS No: RV-84-A-064

a. Characterization

Falsification of records - American Society for Nondestructive Testing (ASNT) Level II Magnetic Particle Test (MT) inspector restrictions were waived by a backdated signature of a Pullman Level III MT inspector who was no longer on site.

b. Implied Significance to Plant Design, Construction, or Operation

The qualifications of Level II MT inspectors were compromised by falsification of records.

c. Assessment of Safety Significance

The records of the Level II MT inspectors in question were examined as well as the records of other inspectors who were certified during the same time frame. The staff verified each of the Level II MT inspectors met all ASNT requirements including experience as specified in ASNT Recommended Practice No. SNT-TC-1A at the time of certification.

The staff identified letters in the training records which placed interpretation restrictions on several Level II MT inspectors. These restrictions were placed on the inspectors several months after initial qualification. The staff interviewed the Field QA/QC Manager who placed these restrictions on the Level II inspectors and found that the restrictions were placed on the inspectors verbally at the time of qualification. Furthermore, these interpretation restrictions required all results of examinations conducted by these Level II inspectors to be subject to a final interpretation by a Level III MT inspector. This restriction remained in effect until the individual Level II inspector could interpret examination results to the satisfaction of the Field QA/QC Manager, who was a qualified Level III MT inspector. The restrictions were removed by verbal notification of the individual inspector and by placing a letter removing the interpretation restrictions in the inspector's training record. The several month lag time in placing the restriction letters in the inspectors training records was due to the hospitalization of the Field QA/QC Manager.

The staff also reviewed an audit of training records conducted by a QA internal auditor which identified two inspectors who did not have letters removing these restrictions in their training records. The QA internal auditor who had identified these training record discrepancies closed the audit finding by allowing the new Field QA/QC Manager to forward backdated letters to the former Field QA/QC Manager, who had placed the restrictions on the two inspectors. The former Manager who had been transferred to another job site signed these letters which were backdated to when he was last on site at Diablo Canyon. These backdated letters were then placed in the training record of the two Level II inspectors with no indication that the letters were backdated or the reason for backdating.

The staff reinterviewed the former Field QA/QC Manager and found that the two Level II MT inspectors had both been given verbal notification that they could resume full interpretation responsibility as they had demonstrated satisfactory interpretation ability to the Manager. The former Field QA/QC Manager admitted the failure to ensure a letter documenting the restrictions were removed was an administrative oversite on his part. The Manager interpreted his signing of backdated letters as an acceptable method of resolving an administrative oversite on his part to the satisfaction of the QA auditor.

d. Staff Position

The staff finds that the inspectors met all code and regulatory requirements and therefore, finds no violations of regulations. The issue here concerns the administration of requirements placed over and above those required by the Code. The staff finds the backdating of records an unacceptable practice in any circumstance let alone as a resolution to an audit finding and believes the licensee should take corrective action to preclude reoccurrence. However, even though an unacceptable practice was used, it had no safety significance. The qualifications of the Level II MT inspectors was not compromised as a result of the backdated letters as they had both met all requirements of SNT-TC-1A prior to certification and prior to having the restrictions placed on them and they did not start interpreting on their own until given permission to do so by the QA/QC Manager.

e. Action Required

No further action is required.

Task: Allegation or Concern No. 718

ATS No: RV-84A-062

a. Characterization

Instructional documents on weld symbology were not distributed as claimed by PG&E.

b. Implied Significance to Plant Design, Construction or Operation

This GAP rebuttal implies PG&E has made false statements concerning distribution of weld symbol handouts and clarity of memos concerning weld symbology interpretation.

c. Assessment of Safety Significance

As a result of investigation into allegations listed in SSER 21, the NRC staff requested Pacific Gas and Electric (PG&E) to provide further information on the use and interpretation of weld symbols. In response, PG&E issued letter no. DCL-84-40 dated February 7, 1984. Within this letter, under the subject heading of "Communication of Information", statements were made that "Communication on weld design and weld symbol use has taken several forms, including discussion sessions and written direction...this program will continue to assure proper communication of weld symbol use and weld design (Attachment 3)." Attachment 3 of PG&E letter DCL-84-40 was enclosed as a copy of the weld symbol handout distributed at discussion (training) sessions. Examples of written directions circulated to the field were also enclosed in PG&E letter DCL-84-40 as Attachment 4.

Under the topic heading "PG&E Position 16" in attachment 5 of the March 23, 1984, Government Accountability Project (GAP) letter, the aforementioned PG&E response was refuted by GAP as follows "Further, as of March 16, 1984, the referenced Attachment 3 was not issued to the field, or at least to anywhere that I or anyone I know at Diablo Canyon has worked".

PG&E has subsequently addressed the GAP rebuttal in their letter DCL-84-243 dated June 29, 1984. In this response, PG&E declared the GAP statement to be false and re-affirmed that distribution of Attachment 3 to DCL-84-40 had occurred during "jobsite training programs regarding weld symbols which were conducted in May, June and July of 1983, in which 350 engineers and inspectors received training in weld symbols".

The inspector has reviewed all previously mentioned GAP and PG&E correspondence. Conduct of training sessions and distribution of Attachment 3 type weld symbol handouts were verified by the inspector and documented in Inspection Report 50-275/84-36. Handouts of this kind were distributed during training sessions, they were not circulated openly to the field. Nor did PG&E claim that such was the case.

A corollary issue identified in GAP rebuttal of "PG&E Position 16", also disputed the content accuracy of weld symbology clarification correspondence that were enclosed in Attachment 4 to PG&E letter DCL-84-40. The inspector reviewed the subject memos which were titled dated October 10, 1983, "Do's and Don'ts for Welding Symbols" and "Clarification of Pipe Support Weld Symbols" dated October 10, 1983. Content adequacy of these weld symbol clarification memos was determined to be acceptable by the inspector considering their intent and context of use, as the clarification memorandum dealt with symbols applicable to existing documents and the "Do's and Don'ts" related to future work. The NRC staff formally addressed this issue in Allegation 720 and was closed (as complete) by Region V Allegation Board meeting of October 24, 1984.

The fundamental technical issue concerning adverse impact on safety-related construction activities from weld symbol misinterpretation was addressed by the staff in SSER-22 (allegation No. 126). Other allegations (Nos. 719, 1116, and 1118) concerning "ambiguous weld symbology" and "inadequate weld symbol training" were also resolved by the staff in Inspection Report 50-275/84-36.

The inspector could discover no evidence, nor discern any reason, to support the GAP rebuttal. Applicable responses in PG&E letters DCL-84-40 (dated February 7, 1984) and DCL-84-243 (dated June 29, 1984) appear to be consistent and acceptable.

d. Staff Position

The inspector concludes this allegation is unsubstantiated, and any technical significance has been previously addressed by the staff in documents referenced above.

e. Action Required

No further action required.

Task: Allegation or Concern Nos. 1649 and 1654

ATS No: RV-84-A-122

a. Characterization

Promatec installation of seals in crane wall (inside containment) and auxiliary building penetrations is not satisfactory since the seals are being "faced off" with material which does not have traceability.

BEST COPY AVAILABLE

b. Implied Significance to Plant Design, Construction or Operation

The subject penetration seals perform one or all of the following functions: 1) radiation shielding, 2) hydrostatic/air sealing and 3) fire barrier sealing. Unsatisfactory penetration shielding could result in increased personnel radiation exposure or unanticipated damage to safety-related equipment (as a result of fires or steam line breaks).

c. Assessment of Safety Significance

The concerned individual identified specific locations to the licensee where face-off material, which did not have material traceability, was applied. As described in Quality Concern Summary Report (QCSR)-110, the licensee then documented these discrepancies in Minor Variation Report (MVR) C-1471, Rev. 1, since Promatec had failed to properly document the use of untraceable materials.

PG&E Engineering and Promatec subsequently evaluated this situation and determined that the depth of the shield material could typically be varied by plus or minus two inches overall. Accordingly, Promatec issued Document Change Request 0071039 to allow a two inch underfill tolerance on penetrations (mechanical penetrations with depth greater than eight inches; electrical penetrations with depth greater than twelve inches). Thus, the face off material installed in the penetrations was determined to be unnecessary, and material traceability of that material was no longer required.

In order to prevent reoccurrence of this type, Promatec QC and craft personnel were reindoctrinated in procedural requirements pertaining to documentation and traceability for facing-off penetrations. Furthermore, additional actions were taken by the licensee to assure that untraceable material would not be used in penetration seals.

d. Staff Position

The staff finds that the described discrepancy has been properly documented and dispositioned; and that although the licensee failed to assure that face-off materials were traceable, there would be no adverse impact on safety if the face off material were not traceable.

e. Action Required

No further action is required.

Task: Allegation or Concern No. 1650

ATS NO: RV-84-A-122

a. Characterization

High density lead elastomer (HDLE) material, used in penetration seals (see Allegation or Concern No. 1649), had material expiration dates which were exceeded.

b. Implied Significance to Plant Design, Construction or Operation

Same as Allegation or Concern No. 1649.

c. Assessment of Safety Significance

In QCSR-110, the licensee verified that a shipment of outdated lead elastomer was received on-site, but had been placed on "hold" as indicated in Promatec Receiving Report Nos. 007/048, 007/051 and 007/052. Promatec removed expired bags of elastomer from the HDLE barrels (which also contained dry lead particles) and replaced them with new certified elastomer. A check of several storage areas showed that material currently in use was not outdated.

d. Staff Position

As the outdated elastomer had already been properly identified and not used in penetration seals, no discrepancy was found to exist.

e. Action Required

No further action is required.

Task: Allegation or Concern No. 1651

ATS No: RV-84-A-122

a. Characterization

Catalist and accelerator materials, used in penetration seals (see Allegation or Concern No. 1649), were used onsite even though this material had passed its expiration date.

b. Implied Significance to Plant Design, Construction or Operation

Same as Allegation or Concern No. 1649.

c. Assessment of Safety Significance

The licensee's investigation revealed that Promatec did use expired cure accelerator materials in penetration seals, but these errors were documented on Nonconformance Reports 007/010 and 007/019 (see QCSR-110), prior to the concerned individual identifying the problem to the NRC. Shortly thereafter, a sample of the cure accelerator from the same lot was tested by the manufacturer and deemed acceptable, and the useful life was extended. Accordingly, the cure accelerator material used in the penetrations was also acceptable.

In order to provide better control of seal material shelf life, Promatec issued Site Work Instruction PMT-007.001 "Field Monitoring and Control of Promatec Sealing Materials with Shelf Life Limitations." The procedure requires monitoring of controlled materials which have shelf lives, and defines personnel responsibilities, material control methods and corrective action requirements.

d. Staff Position

The staff has determined that the licensee had already identified and initiated corrective actions to resolve the issues raised in this concern.

e. Action Required

No further action is required.

9. Open Items Followup

a. Masonry Walls Interface with Safety-Related Components (TI-15-37, closed Units 1 & 2)

The licensee has reviewed the analysis for masonry wall structural integrity in the Independent Design Verification Program and the Internal Review Program. This review used more conservative computer codes than originally used for masonry wall design evaluation. This revised analysis showed that additional support was required for selected masonry block walls. NRR is continuing to follow the licensee's analysis required by License Condition 2.C.(10). The inspector verified completion of selected portions of the additional support requirements. This included verification of angle iron-base plate installation (through-bolting and anchoring) to the building structures. This closes the open temporary instruction.

No violations or deviations were identified.

b. Loss of Source Range Instruments (open item 84-21001, closed)

The licensee has changed applicable STP's which should preclude future loss of source range instruments. Furthermore, the generic issue of on-the-spot changes to procedures has been addressed and how such changes are incorporated into the text of the procedure. This item is closed.

10. Isolations of Residual Heat Removal (RHR) System Unit 1

On January 20, 1985 at approximately 11:00 p. m., the RHR system hot leg suction line was unexpectedly isolated. Operators were alerted by the

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APR 24 1985

Docket Nos. 50-275 and 50-323

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation

Gentlemen:

SUBJECT: NRC INSPECTION OF DIABLO CANYON UNITS 1 AND 2

This refers to a routine inspection, conducted by Messrs. M. M. Mendonca, M. L. Padovan, T. M. Ross, and T. J. Polich, of this office during the period of February 17, 1985, through April 6,1985. This inspection examined your activities as authorized by NRC License No. DPR-80, and Construction Permit No. CPPR-69. Discussions of our findings were held with Mr. R. C. Thornberry, and other members of your staff, at the conclusion of the inspection.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

No violations of NRC requirements were identified within the scope of this inspection. However, your attention is invited to specific findings in the report pertaining to Unit 2 operations. We recommend you focus on these issues before entering a mode of operation where these findings become critical.

In accordance with 10 CFR 2.790 (a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

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APR 24 1985

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

D. F. Kirsch, Acting Director
Division of Reactor Safety
and Projects

Enclosure:
Inspection Report Nos. 50-275/85-08 and 50-323/85-09

cc w/enclosure:
S. D. Skidmore, PG&E
P. A. Crane, Jr., PG&E
R. C. Thornberry, PG&E (Diablo Canyon)
D. A. Taggert, PG&E (Diablo Canyon)
R. Weinberg, PG&E (Diablo Canyon)

bcc w/enclosure:
RSB/Document Control Desk (RIDS)
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Resident Inspector
State of CA

RV

Padovan/dot	Ross	Polich	Mendonca		Kirsch
4/18/85	4/18/85	4/18/85	4/18/85	4/18/85	4/23/85

U. S. NUCLEAR REGULATORY COMMISSION
REGION V

Report Nos: 50-275/85-08 and 50-323/85-09

Docket Nos: 50-275 and 50-323

License No: DPR-80

Construction Permit No: CPPR-69

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: February 14 - April 6, 1985

Inspectors: R T Dodds for 4/18/85
M. M. Mendonca, Sr. Resident Inspector — Date Signed

R T Dodds for 4/18/85
M. L. Padovan, Resident Inspector — Date Signed

R T Dodds for 4/18/85
T. M. Ross, Resident Inspector — Date Signed

R T Dodds for 4/18/85
T. J. Polich, Resident Inspector — Date Signed

Approved by: R T Dodds 4/18/85
R. T. Dodds, Section Chief — Date Signed

Summary:

Inspection from February 17, 1985 through April 6, 1985
(Report Nos. 50-275/85-08 and 50-323/85-09)

Areas Inspected: Routine inspection of: Plant operations; maintenance and surveillance activities; Unit 2 preoperational test program; Unit 1 power ascension testing; Unit 2 systems turnover; followup of open items amd LERs; reactive inspection of significant operational events and allegations; independent inspection of licensed operator shift manning, generic concerns, EQ program, and GONPRAC meeting.

This inspection effort required 357 inspector-hours for Unit 1, and 303 inspector hours for Unit 2 by four resident inspectors.

These procedures reference plant drawing 050909 which lists all electrical and I&C devices by manufacturer, model number, design class, Q listing reference, seismic qualification, and enviromental qualification. From drawing 050909, environmental qualification requirements for selected equipment were noted and verified to be consistent with the requirements for preventive maintenance and surveillance testing of selected equipment.

This program further requires any EQ equipment, work, and documentation to be specifically labeled as EQ; additionally, the program required training in the EQ procedures, as well as, updating and failure trend analysis. The licensee has planned for full implementation of the EQ program by March 31, 1985. This date is consistent with an understanding between the NRC's Office of Nuclear Reator Regulation licensing project manager for Diablo Canyon and PG&E cognizant engineering group.

e. Station Battery Installation, Operation and Maintenance

J. M. Taylor's (NRC) February 26, 1985, memo to the NRC Regional Administrators on the subject of "Station Battery Operation and Maintenance," identified several deficiencies previously existing in the installation, operation and maintenance of station batteries at several nuclear facilities. In response to this memo, the inspector evaluated the condition of the Unit 1 station battery. Items evaluated included 1) the physical installation (such as battery supports, battery fluid level, cleanliness, cell integrity, lack of terminal corrosion and cell sediment, etc.) and 2) battery records (such as float voltages, performance of service tests, specific gravity measurements, equalization charges, full capacity tests, etc.). Additionally, the inspector witnessed the performance of STP M-11A "Measurement of Station Battery Pilot Cell Voltage and Specific Gravity." The inspector verified that 1) the acceptance criteria of STP M-11A was met, 2) the requirements of Technical Specification Surveillance Requirement 4.8.3.1 "Electrical Power Systems - D. C. Sources" have been complied with, and 3) the recommendations contained in J. M. Taylor's memo are being instituted for the Diablo Canyon Unit 1 station batteries.

No violations or deviations were identified.

10. Allegation Followup

Task: Allegation or Concern No. 152

ATS No: RV-84-A017

a. Characterization

Concerns with installation of P 1331 conduit clamps. Three specific concerns were identified: 1) P 1331 inner bolts cannot be torqued to the specified torque; 2) the torque relaxes after several days; and 3) the torque values specified are excessive.

b. Implied Significance to Plant Design, Construction, or Operation

Improper installation of P 1331 conduit clamps might result in raceway supports being incapable of performing their intended functions.

c. Assessment of Safety Significance

The staff verified that, prior to this allegation, the licensee had identified electrical raceway supports that were not torqued to values required for seismic design conditions. The licensee subsequently issued 1625 torque modification packages for Unit 2 raceway supports to correct these deficiencies. During the implementation of the torque modification program, the licensee identified 159 torque modifications that could not be accomplished as originally specified.

Additional engineering analysis was required on these torque modifications, 78 of which involved P 1331 clamps. Original torque modifications required all clamp bolts regardless of position, inner or outer, to be torqued to the value required for the critical load-bearing bolt or bolts on the clamp. Subsequent torque modifications identified the specific bolts that required torquing and either an alternative method to torque the inner bolts if they were load-bearing or other methods to accomplish seismic hardening of the clamps such as increasing the torque on other bolts, or welding. The staff reviewed the revised torque modifications on a sampling basis to ensure that the inner bolt torquing concern was identified and adequately addressed by the licensee.

The staff determined that the second concern regarding bolt relaxation was addressed by the licensee prior to implemention of original torque modifications. The licensee contracted ANCO Engineers Inc. to conduct tests to determine the slip-resistance capacity of bolted connections for various nut types and bolt torques. These test results were utilized by the licensee in preparing the original torque modifications. The inspector reviewed portions of the ANCO Engineering's Test Report which verified no significant bolt relaxation was observed during testing.

It was also determined that the third concern stating the torque values specified are excessive was addressed by the licensee prior to receipt of this allegation. When the higher "excessive" torque value of 85 ft-lbs was required by engineering analysis, a Design Change Notice (DCN)was issued which included a hardware change to bolts that had been tested for both slip-resistance and torque relaxation at this higher torque. The inspector verified that the DCNs included such hardware changes.

d. Staff Position

The staff found that the licensee properly identified and dispositioned these installation concerns prior to the allegation and there is acceptable assurance that raceway supports were properly installed. Furthermore, in Section 6 of Supplemental Safety Evaluation Report No. 29, March 1985, the staff concluded, that the methods used by the licensee to evaluate electrical raceway supports including actual bolt torque levels, were acceptable.

e. Action Required

No further action is required.

Task: Allegation or Concern Nos. 1652 and 1653

ATS NO: RV-84-A122

a. Characterization

Installation, inspection and testing of seals in crane wall (inside containment) and auxiliary building penetrations were performed by personnel who were not properly trained. Indoctrination records were falsified.

b. Implied Significance to Plant Design, Construction or Operation

The subject penetration seals perform one or all of the following functions: 1) radiation shielding, 2) hydrostatic/air sealing and 3) fire barrier sealing. Unsatisfactory penetration shielding could result in increased personnel radiation exposure or unanticipated damage to safety related equipment (as a result of fires or steam line breaks).

c. Assessment of Safety Significance

In responding to a Hot-Line concern, as documented in Quality Concern Summary Report-110, the licensee held additional conversations with the concerned individual. The individual indicated that he did not intend to imply that training records were falsified. Instead, he clarified that training of Promatec installation, inspection and testing personnel was not adequate.

The licensee's findings from their review of the individual's concern concurred that further onsite training and indoctrination of Promatec craft personnel was necessary. Accordingly, all Promatec personnel were directed to attend QA orientation classes. Additionally, specific instruction in procedures, regulations, methods, responsibilities, and personnel interfacing, as applicable, was provided to Promatec personnel. The staff reviewed records to verify attendance at this training.

Conversely, the licensee's review also determined that Promatec QC personnel were well trained and knowledgeable. The staff established, from a review of the Promotec procedures, that OC hold points were required to be implemented. The staff determined that the licensee verified that QC hold point inspections had been performed as specified in the seal installation process. Therefore, assurance is provided that previously installed penetration seals are satisfactory.

d. Staff Position

The staff finds that the concerns identified above have been responsibly dispositioned by the licensee.

e. Action Required

No further action is required.

No violations or deviations were identified.

11. Open Item Followup

a. Vendor Problems Tracking System (Open Item 84-03-01, Closed)

The licensee has instituted a new commitment control module as part of the plant information management system that is used to track vendor problem reports. Additionally, responsibilities have been defined for Westinghouse Technical Bulletins, NRC Bulletins and Notices, Nuclear Operations Maintenance Information Service information, and INPO's Significant Operating Experience Reports and information service. This item is closed.

No violations or deviations were identified.

12. Licensee Event Report (LER) Follow-up (Unit 1)

Circumstances and corrective actions described in the following LERs were examined. Review of the LERs, and reporting to NRC within required time intervals by the licensee, was verified by the inspectors. The inspectors also ensured appropriate corrective actions were established and applicable events were accurately described. Accordingly, the following LERs are considered closed:

LER 85-04:	Nonfunctional fire barriers were acceptably reported and addressed by the licensee.
LER 85-03; LER 85-06; LER 85-07; LER 85-09:	These four LERs were discussed in Inspection Report Number 50-275/85-01 and were verified to have been acceptably reported by the licensee.
LER 85-11:	The manual reactor trip on loss of feedwater is discussed within this report; it was also acceptably addressed and reported by the licensee.

No violations or deviations were identified.

Docket Nos. 50-275, 50-323 MAY 08 1985

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: J. D. Shiffer, Vice President
Nuclear Power Generation, Licensing

Subject: NRC Inspection of Diablo Canyon Units 1 and 2

This refers to the special inspection conducted by Messrs. D. B. Pereira and T. Crowley of this office during the period of March 25 through April 26, 1985, of activities authorized by NRC License No. DPR-76 and Construction Permit No. CPPR-69.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

No violations with NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,
Original signed By
D. F. Kirsch
D. F. Kirsch, Acting Director
Division of Reactor Safety & Projects

Enclosure:
1. Inspection Report Nos. 50-275/85-16, 50-323/85-16
2. PG&E Letter No. DCL-85-15-2
3. PG&E Letter No. DCL-85-153

cc w/enclosure:
Jim Knight, NRR;
S. D. Skidmore, PG&E
P. A. Crane (PG&E)
R. C. Thornberry (PG&E - Diablo Canyon)
D. Taggart (PG&E - Diablo Canyon)
R. Weinberg (PG&E - Diablo Canyon)
Sandra Silver
State of CA

bcc: RSB/Document Control Desk (RIDS); Mr. Martin; Resident Inspector; LFMB

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U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/85-16 and 50-323/85-16

Docket Nos. 50-275 and 50-323

License No. DPR-76

Construction Permit No. CPPR-69

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: March 25 through April 26, 1985

Inspectors: David B. Pereira — May 7, 1985
D. B. Pereira, Reactor Inspector — Date Signed

R J Dodds for — 5/7/85
T. Crowley, Reactor Inspector — Date Signed

Approved by: R J Dodds — 5/7/85
R. T. Dodds, Chief, Reactor Projects Section 1 — Date Signed

Summary:

Inspection from March 25 through April 26, 1985 (Report Nos. 50-275/85-16 and 50-323/85-16)

Areas Inspected: Routine followup of various allegations. This inspection involved 86 inspection hours by two inspectors.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

M. Tresler, Project Engineer Assistant, PG&E
S. M. Skidmore, Manager, Quality Assurance, PG&E
D. Aaron, Quality Assurance Engineer, PG&E
P. G. Dahan, Quality Control Engineer, PG&E
J. Brattois, Special Projects, PG&E
R. Hobgood, Supervisor, Quality Control, PG&E
K. A. Nilson, Field Engineer, PG&E
H. Karner, Manager, Quality Assurance/Quality Control, Pullman Power Products

NOTE: The allegation characterization statements contained in this report are a paraphrasing of the staff's understanding of the allegers concern based upon copies of their affidavits and other documents submitted by allegers. The characterization statements do not represent a staff assessment, conclusion or position.

2. Allegation or Concern Nos. 1664, 1668, 1673, 1674, 1675, 1676 and 1677

ATS: RV-85A-0999

Characterization

Pullman Power Products' Discrepancy Report #9173 (12-21-84) does not provide for a system of identification, documentation, segregation and disposition of Cardinal materials previously purchased and installed by Pullman in both units of the Diablo Canyon Nuclear Plant. This is a nonconformance to 10 CFR 50 Appendix B criteria XV - Nonconforming Materials, Parts or Components and Criteria XVI - Corrective Action.

Pullman DR#9173 only provides for a system of identification and documentation for material in Pullman's warehouse/storage areas which were manufactured by Cardinal.

PG&E does not provide a system of identification, documentation and segregation of Cardinal materials previously purchased and installed by Pullman in the plant. Nonconformance to 10 CFR 50, Appendix B, Criteria XV and XVI.

PG&E QA instructions do not specifically provide for a system of identification, documentation and segregation of all Cardinal materials previously purchased and installed by Pullman in the plant. Nonconformance to 10 CFR 50, Appendix B, Criteria XV and XVI.

Failure by PG&E/Pullman's DR#9173 to address/identify, document and segregate Cardinal materials previously purchased and installed by Pullman in the plant is a significant condition adverse to quality.

Cardinal materials' quality is indeterminate for material purchased prior to 1-9-84.

PG&E conveniently ignored findings on Cardinal's QA program until well after any licensing impact.

Implied Significance to Design, Construction, or Operation

Pullman has purchased and installed Cardinal bolts and fasteners at the Diablo Canyon Nuclear Plant since 1977. Since Cardinal's past Quality Assurance Program has been identified by the NRC and PG&E to have significant deficiencies making the quality of their material indeterminate, this material could result in an inability of safety systems to perform their intended safety functions.

Assessment of Safety Significance

Background

On June 29, 1984, the NRC issued Information Notice No. 84-52, "Inadequate Material Procurement Controls on the Part of Licensees and Vendors" to inform licensees of deficient procurement controls and quality assurance (QA) practices on the part of suppliers of nuclear materials and to call attention to possible generic problems in procurement activities of licensees. The Information Notice stated that a large number of quality-related deficiencies on the part of nuclear suppliers was revealed in the NRC inspections. One of these nuclear suppliers, Cardinal Industrial Products Corp., was suspected of deficient procurement controls and QA practices.

As a result PG&E conducted an audit of Cardinal Industrial Products on December 6-7, 1984 and January 3-4, 1985, in Las Vegas, Nevada. The purpose of the audit was to determine if they had adequately implemented their quality assurance program for materials Cardinal supplied to the Diablo Canyon Power Plant. The audit found that there was insufficient documented evidence to support the adequate implementation of Cardinal's quality assurance program.

Cardinal was removed from the PG&E Qualified Supplier's List on September 28, 1984, after PG&E's review of the NRC inspection of Cardinal. Per PG&E's request, Pullman Power Products issued Discrepancy Report (DR) #9173 on December 21, 1984 which placed all material in Pullman's warehouse which was manufactured by Cardinal Industrial Products Corporation on hold. This DR disposition included listing all Cardinal manufactured items currently in stock, identifying all items currently ordered from Cardinal but not yet received, segregating and retaining a minimum of four items of each size and heat number for possible future testing, and issuing instructions for conditionally releasing items placed on hold pursuant to PG&E's authorization in their letter to Pullman dated December 21, 1984. This action was approved by the Technical Review Group (TRG) on January 21, 1985 in accordance with section 10.1 of the PG&E Quality Assurance Program.

The alleger has stated that the Pullman Power Products DR#9173 does not provide for a system of identification, documentation, segregation and disposition of Cardinal materials previously purchased and installed by Pullman in both units of the Diablo Canyon Nuclear Plant, and is applicable only for material manufactured by Cardinal. The alleger has stated that PG&E and PG&E Quality Assurance instructions do not specifically provide for a system of identification, documentation and segregation of Cardinal materials previously purchased and installed by Pullman in the plant. According to the alleger, this is a nonconformance to 10 CFR 50, Appendix B, Criteria XV and XVI. In addition, the alleger states that failure by PG&E/Pullman DR#9173 to address/identify, document and segregate Cardinal materials previously purchased and installed by Pullman in the plant is a significant condition adverse to quality. The alleger states that Cardinal materials' quality is indeterminate for material purchased prior to 1-9-84.

Staff Findings

The problem area in question and selected records of PG&E and Pullman Power Products were examined and assessed by the inspectors. The inspectors examined these allegations with the intent of evaluating whether licensee management had acted in a responsible manner in their assessments and conclusions, and determining whether any technical question remains unresolved.

Cardinal Industrial products has developed and is currently implementing an extensive action plan for revalidation of materials supplied to the nuclear industry that has been reviewed and approved by the NRC's Vendor Program Branch. The approved program includes documentation/certification verification, physical and chemical analysis verification tests of selected lots of material, and an extensive vendor validation and monitoring program to ensure purchase order requirements have been passed down through the channel to the subcontractor(s). The sampling plan basis will provide a 95% confidence level for each product category supplied through each "channel" (i.e. includes all contractors down to the raw material producer).

The licensee has determined that they and their contractors, principally Pullman, have received 197 purchase orders consisting of 943 line items from Cardinal. Attached to this report is PG&E letter No. DCL-85-153 which is a status report of the Cardinal revalidation program as it applies to Diablo Canyon. Any identified discrepancies resulting from the revalidation program are being dealt with (located and segregated as appropriate) in accordance with the licensee's QA program for "Nonconformances and Corrective Actions," Procedure 10.1.

The ASME SA material certification review program has been completed. The certification review for other than ASME material was 90% complete. The results of the reviews to date have disclosed that appropriate documentation is in place for materials reviewed with one exception pertaining to forty-eight A193 studs and A194 nuts supplied to Unit 2 for the main steam line isolation valves. In this case, material traceability was lost on the studs during the forming process, and the

studs during the forming process, and the

nuts had been purchased from an unapproved source.

The inspector verified that the discrepant studs and nuts had been located and replaced with acceptable material in accordance with the QA program. The licensee has tested these studs and nuts and determined that they meet the required material specifications and, therefore, would have performed as designed had not the discrepancy been identified.

Staff Position

The staff concludes that PG&E has a QA program inplace for controlling nonconforming material and that this program was followed in the identification and segregation of material in stock and in the dispositioning of the one instance where the NRC approved Cardinal revalidation program identified potential discrepant material. This series of allegations is considered closed.

Action Required

None.

3. Allegation or Concern Nos. 1666, 1665, and 1667

ATS: RV-85A-0999

Characterization

Pullman Power Products' Vendor Quality system audit of Cardinal did not address heat treating of material as required.

Pullman's Vendor Quality system audit program for Cardinal is in nonconformance to ASME Section III, NCA-3820, a, b, and c (1980 Edition) and 10 CFR 50 Appendix B Criteria VII - Control of Purchased Material, Equipment, and Services.

Cardinal appears to have had no quality system program covering heat treating of material during 1981.

Implied Significance to Plant Design, Construction, or Operation

Incorrect or nonexistant heat treatment of Cardinal material purchased for Diablo Canyon Nuclear Plant may result in the quality of the material to be indeterminate, thus resulting in an inability of safety systems to perform their intended safety functions.

Assessment of Safety Significance

Background

The alleger has stated that Pullman Power Products' Vendor quality system audit of Cardinal did not address heat treating of materials. Specifically, checklist item #18 - verify if heat treating is performed in accordance with approved procedures - is marked not applicable and no audit was performed. Checklist items #19, #20, #21 and #29c having similar heat treatment requirements were also marked not applicable and no audit was performed. The alleger has stated that Pullman's Vendor

no audit was performed. The alleger has stated that Pullman's Vendor

Quality System Audit program for Cardinal is in nonconformance to ASME Section III, NCA-3820 a, b, and c (1980 Edition) and 10 CFR 50 Appendix B Criteria VII, since Pullman did not audit the heat treatment of fasteners manufactured and/or supplied by Cardinal. The alleger has stated that this is a significant condition adverse to quality. The alleger has stated that Cardinal appears to have had no Quality System Program covering heating treating of material during this time period.

Staff Findings

The subject of heat treating was examined and assessed by the inspectors. The subject was also discussed with licensee personnel. The inspectors verified that Cardinal did not perform heat treating of materials, but rather had Precision Heat Treating Company perform the heat treatment before 1981. As a consequence there was no Cardinal Heat treatment program and the audit checklist items #18, #19, #20, #21, and #29c were correct in being marked not applicable. The first time Cardinal performed in house heat treatment for Diablo Canyon material was February 21, 1983. There was no prior in house heat treatment used on Diablo Canyon or Pullman materials. Therefore, heat treating records for Pullman orders were, in fact, not auditable at the Cardinal facility.

The alleger's interpretation is incorrect concerning Pullman's Vendor Quality System Audit program for Cardinal per ASME Section III, NCA-3820 a, b, and c and 10 CFR 50 Appendix B Criteria VII, since Pullman conducted audits of Cardinal's Quality Assurance program. Cardinal conducted a system of planned and documented external audits performed to verify compliance with all aspects of the suppliers and suppliers of subcontracted services (such as heat treatment). Cardinal conducted Q.A. surveys of Precision Heat Treating on 8/25/78, 8/27/79, 7/3/81, 12/6/82, and 12/1/83 by C.W. Eliason. All audits and surveys by Cardinal found Precision Heat Treating acceptable. Pullman's audit revealed that Cardinal's Quality Assurance Manual, Section 8 performs audits of external suppliers of subcontracted services. Even through Cardinal had no heat treatment program, the Cardinal audits of Precision Heat Treating verified that the material was properly prepared and had quality documentation for shipment to Pullman. Therefore, there is no deficiency in the 1980 and 1981 audits of Cardinal with respect to heat treating and no non-conformance to ASME Section III NCA or 10 CFR 50, Appendix B.

Staff Position

The staff concludes that this allegation is not valid based on both Pullman's and Cardinal's audits. There is no requirement for Pullman to conduct an audit of Precision Heat Treating. Cardinal's prior audits of their heat treatment supplier indicated satisfactory results and no trend towards poorer quality was indicated. These allegations are closed. No violations or deviations were identified.

Action Required

None

4. Allegation or Concern Nos. 1669, 1670, 1671, and 1672

ATS: RV-85A-0999

Characterization

Pullman's Vendor Quality System Audit did not list and no audit was performed to determine if the person or department responsible for defining and implementing the overall effectiveness of the quality program reported regularly on the effectiveness of the program.

Pullman's Vendor Quality System Audit failed to check Cardinal employees who performed functions within the scope of ASME Section III to determine if they were qualified to perform their duties in 1981.

Pullman's 1981 audit of Cardinal did not audit to see if nondestructive examinations (NDE) were performed in accordance with approved procedures.

Pullman's 1981 audit of Cardinal did not audit major portions of the quality system program, as required.

Implied Significance to Plant Design, Construction, or Operation

The overall effectiveness of the quality assurance program needs to be reported to ensure material, procedural, and operational requirements are met on a continuing basis.

Only qualified Cardinal employees who perform functions within the scope of ASME Section III should perform those functions. NDEs need to be performed in accordance with approved procedures.

Assessment of Safety Significance

Background

The alleger has stated that Pullman's audit did not list or determine the person or department responsible for defining and implementing the overall effectiveness of the program. The alleger further states the Pullman audit failed to check Cardinal employees who performed functions within the scope of ASME Section III to determine if they were qualified to perform such duties. Pullman's audit failed to determine if NDE's were performed in accordance with approved procedures. In addition, Pullman's audit of Cardinal did not audit major portions of the quality system program, as required.

Staff Findings

The inspectors examined the 1981 Pullman's audit of Cardinal and assessed the alleger's findings of Pullman's audit deficiencies.

The inspectors verified that Pullman's audit did determine that Cardinal's Quality Assurance Manual, Section 3 had the necessary items implemented to define and implement the overall effectiveness of the QA program. The items listed were that the person was designated in writing, independent from production pressures, and had direct access to management.

Diablo Canyon SSER-33 B.4-8 Appendix B

The audit finding code was satisfactory. Cardinal's Quality Assurance Manual, Section 3 satisfied the audit evaluation step. The staff disagrees with the alleger, since Cardinal's QA manual, section 3 listed the person or department responsible for defining and implementing the overall effectiveness of the program. Pullman's audit did list the individuals or department, but only quoted Section 3 of the Q.A. Manual.

The alleger is correct in his statement that no Cardinal employee who performed functions within the scope of ASME Section III were audited to determine if they were qualified as specified by Section III. However, no Cardinal personnel performed NDE, and no special processes were performed by Cardinal. The audit by Pullman clearly states that NDE is performed by Eagle Intermountain Testing and Eagle Intermountain personnel are listed.

Pullman's 1981 audit of Cardinal was correct in not auditing to see if NDEs were performed in accordance with approved prcoedures. Cardinal has a Quality Assurance manual, Section 8 which verifies that subcontractors (Eagle Intermountain Testing) have QA programs.

The staff found that the Pullman 1981 audit was quite detailed and involved every major activity that Cardinal performed. It simply did not audit those items that Cardinal did not perform but that had to be subcontracted, such as heat treating and NDE.

Staff Position

The staff concludes that the allegations are not valid based on both Pullman's and Cardinal's audit findings. Pullman's 1981 audit was extensive and examined every activity that Cardinal performed. Pullman did not audit the subcontractor that Cardinal was using for heat treatment and NDE. These allegations are closed. No violations or deviations were identified.

Action Required

None.

Docket Nos. 50-275 and 50-323 JUL 19 1985

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation

Gentlemen:

Subject: NRC Inspection of Diablo Canyon Units 1 and 2

This refers to the special inspections conducted by LLNL inspectors under contract to this office during the period of February 11 through July 17, 1985, of activities authorized by NRC License Nos. DPR-80 and DPR-81.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,
Original signed by
D. F. Kirsch, Acting Director
Division of Reactor Safety & Projects

Enclosure:
Inspection Report Nos. 50-275/85-27 and 50-323/85-24

cc:
Jim Knight, NRR
S. D. Skidmore, PG&E
R. C. Thornberry, (Diablo Canyon)
P. A. Crane, Jr., PG&E
D. Taggart, (Diablo Canyon)
R. Weinberg, (Diablo Canyon)
Sandra Silver (report only)
State of CA
bcc: RSB/Document Control Desk (RIDS)
Mr. J. Martin
Resident Inspector
RV

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U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/85-27 and 50-323/85-24

Docket Nos. 50-275 and 50-323

License Nos. DPR-76 and DPR

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: February 11 - July 17, 1985

Inspectors: LLNL Contract Inspectors

Approved By: R T Dodds 7/19/85
R. T. Dodds, Chief Date Signed
Reactor Projects Section 1

Summary:

Inspection from February 11 through July 17, 1985 (Report Nos. 50-275/85-27 and 50-323/85-24)

Areas Inspected: Followup of various allegations pertaining to plant construction.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

M. Tressler, Project Engineer
D. Rockwell, Unit 2 Construction Superintendent
J. Bratton, PG&E Allegation Coordinator
D. Dunham, PG&E QC Engineer
T. Pierce, QC Engineer
S. Pascal, PTGC Electrical Department Engineer
W. Cadwell, PTGC Electrical Inspector
R. Ortega, PTGC Electrical Department Engineer
C. Warne, PTGC Instrument and Control Department Supervisor
J. Gisclon, PG&E Assistant Plant Manager
K. Doss, PG&E Onsite Safety Review Group Member
H. Karner, Pullman, QA/QC Site Manager
J. Guyler, Pullman, Internal Auditor
C. Neary, Pullman, QC Supervisor
C. Gunderson, PG&E Allegation Coordinator
C. Dougherty, PTGC, Pipe Support Group, Engineer
D. McGrew, PPP, Engineering, Engineer
G. Thomas, PTGC, Pipe Support Group, Supervisor
G. Vincent, QC Hotline
G. Morrison, PTGC Electrical Department Engineer
R. Cook, PG&E Allegation and Rate-Case Supervisor
M. Lepke, PG&E Onsite Engineering Supervisor
G. Klemm, PTGC Mechanical Department Piping Engineer
R. Seewald, PTGC Mechanical Engineer
G. Johnson, PG&E, PTGC Special Projects Engineer
R. McBay, BCI, PTGC QA/QC Records Supervisor
D. Delfino, Pullman Power Products, Mechanical Engineer

NOTE: The allegation characterization statements contained in this report are either a paraphrasing of the staff's understanding of the allegers concern or statements taken from the allegation source document. The characterization statements do not represent a staff assessment, conclusion or position.

2. Task: Allegation or Concern Nos. 200 and 201

ATS No: RV-84-A-030

a. Characterization

The PG&E nondestructive examination (NDE) weld inspection reports are inconsistent with Foley inspection reports and/or the NDE reports were changed by Foley without the approval of the PG&E inspection team.

b. Implied Significance to Design, Construction or Operation

The allegation implies that the NDE inspection results maybe compromised due to record falsification which may allow uninspected or defective welds to exist in a safety-related structure.

c. Assessment of Safety Significance

The staff reviewed the original NDE reports related to this allegation referenced by PG&E response DCL-84-186. Changes in the weld NDE identification numbers were noted by a single line cross-out with the initials of the person performing the change. No changes were made that totally obliterated the original. The changes were for identification only because each NDE report identifies the weld joint by connection number, detail drawing number and reference drawing, eliminating the possibility that the wrong joint was inspected and/or repaired.

For example, a full penetration V-groove butt joint is identified by Foley by two separate weld numbers. One number is for the face and one is for the root. In certain instances on vertical or horizontal weldments these weld numbers were inadvertently reversed due to the inspectors orientation while inspecting the weld. If the inspector was on the outside looking into the fuel handling building he may call the face of the weld No. 1 and the root No. 2. If he was oriented from the "inside looking out" these numbers were reversed. This situation was rare due to Foley's QCP-6 requirement that the inspectors participate in a continuing training program at least once every three months. This training, emphasized orientation of prints and weld inspection sheets.

d. Conclusion and Staff Position

The allegation that PG&E inspection reports are inconsistent with Foley's inspection reports is substantiated in rare instances, but the inconsistencies are of weld identification number only and present no adverse safety significance. The staff, upon review of the NDE REPORTS found no evidence of unauthorized alterations of the reports.

e. Action Required

None.

3. Task: Allegation or Concern No. 0219

ATS No: RV-84-A-045

a. Characterization

Construction work on the PAM-2 panel in Unit 2 was transferred from HP Foley to PG&E. It is alleged that this action was contrary to procedures and was done to bypass Quality Control inspections.

b. Implied Significance to Design, Construction and Operation

Bypass of procedures in this case could result in inoperability of this portion of the Post-Accident Monitoring System when called upon to operate and could indicate the possibility of a more general failure to fully implement the Diablo Canyon QC program.

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c. Assessment of Safety Significance

The process for PG&E modifications to equipment during construction was reviewed. Modifications of this nature are controlled by QC procedures DCP-10 and DCP-19. Both procedures are applicable to work on safety-related equipment and require QC review of the work plans and QC inspection and sign off of modifications to safety-related equipment. Documentation of activities conducted under these procedures is maintained via form E-72 for DCP-10 and E-53 for DCP-19.

In order to determine if these procedures were correctly applied to the PAM-2 panel in Unit 2, the E-72 and E-53 logs were examined to identify modifications made by PG&E. This examination looked for log entries identified as being associated with PAM or with Design Change Notices that affected PAM-2, as determined from the revision description for the PAM-2 wiring diagrams 435796 Rev. 2 and 435797 Rev. 2. This process identified a number of E-53's and E-72's that may have been related to the Unit 2 PAM-2 panel. Each of these candidate records were reviewed; E-72 number 642 and E-53 number 2082 were identified as the only PG&E conducted modifications on the Unit 2 PAM-2 panel during construction. In both cases, the work was identified as Class 1 and the required QC approvals were obtained.

d. Position

Modifications to the Unit 2 PAM-2 panel that were done during construction by the PG&E Project Team General Construction and the Dry Run Test Group were performed in accordance with approved and applicable PG&E procedures. Documentation generated by these modifications provide evidence that the QC inspections and reviews required by the procedures were conducted.

e. Action Required

None.

4. Task: Allegation or Concern No. 0378

ATS No: RV-84-A-062

a. Characterization:

A QC inspector alleges that he was never provided with support to perform his duties, nor was he provided with proper training.

b. Assessment of Safety Significance

Staff reviewed the affidavit to determine when the alleger was employed by the H. P. Foley Company as a QC inspector. The staff subsequently examined copies of QC inspector training records encompassing the indicated time period.

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The staff review of the documented training records shows that H. P. Foley Company conducted over 750 quality related training sessions from January 1981 to December 1983. The number of people attending each session ranged from one to twenty.

A review of specific training records indicate that the individual involved received classroom training in at least twelve different QA/QC Procedures, as documented on H. P. Foley "Quality Indoctrination and Training Records" dated March 25, 1981, April 1, 1981, February 16, 1983 and March 8, 1983. The training records are all signed by the alleger. In addition to classroom training, the alleger also received over 90 days of on-the-job training.

c. Conclusions and Staff Position

The allegation that a QC inspector was not provided with adequate training cannot be substantiated. Staff review of H. P. Foley training records provide evidence that extensive QA/QC training was indeed conducted. The portion of the allegation that implies the inspector was "not provided with support" lacks specificity, and cannot be substantiated. The allegation has no safety significance.

d. Actions Required

None.

5. Task: Allegation or Concern No. 0624

ATS No: RV-84-A-052

a. Characterization

PG&E officials failed to correct a false statement to the NRC that the Company was ignorant of inaccuracies in the plant manual for operators.

b. Assessment of Safety Significance

Staff review of the allegers affidavit indicates that, an inaccuracy in Volume 16 of the Plant Manual is the source of the allegation. The necessary correction involved a hi-lo level alarm on the reactor coolant pump lube oil system which was incorrectly identified as a lo-level alarm only. Volume 16 of the Plant Manual is discussed on three separate occasions in the affidavit, specifically:

1) Page 13: "...I had repeatedly notified PG&E management (including a memo to Mr. Thornberry, the Plant Manager, which is enclosed as exhibit 8) of an error in Plant Manual Volume 16...."

2) Page 14: "...PG&E claimed ignorance of any errors in Plant Manual, Volume 16, even though I had written memo's on the subject to both John Gisclon and Mr. Thornberry, the Plant

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Manager, and given copies of these memos to the NRC the previous August."

3) Page 31: "...I had complained to the NRC that an error which I discovered in the Plant Manual, Volume 16, 'Annunciator Response' was still uncorrected eight months after I had reported it. NOTE: this problem was ultimately not corrected until January of 1983, over 20 months after I identified the problem...."

GAP letter dated February 2, 1984, page 49, paragraph 170 states that "at a 1982 meeting, PG&E failed to correct a false statement to the NRC staff that the company was ignorant of inaccuracies in its Plant Manual for Operators."

PG&E's response to this allegation dated March 29, 1984, substantiates that the subject of inaccuracies in the Plant Manual were not discussed at the exit interview on January 7, 1984, and that Mr. Gisclon and Mr. Thornberry did not have the opportunity to correct this impression. The PG&E response further stated, "...in fact, however, corrective action was already underway."

The "Corrective Action that was already underway" consisted of:

- Response to the alleger's memo dated June 9, 1981 acknowledging the problem and indicating that it would be corrected.
- Copies of the proposed changes were sent to the alleger by Rob Fisher on January 11, 1982.
- "An on-the-spot change" to Volume 16 of the Plant Manual was issued on January 5, 1983, at the request of NRC.
- Permanent revisions to Volume 16 of the Plant Manual, including correction of the annunciator response problem were incorporated in Revision 3, dated July 15, 1983.

c. Conclusions and Staff Position

The allegation that inaccuracies in the Plant Manual were not discussed at a 1982 meeting can be substantiated. However, PG&E has taken the appropriate action to correct the Manual (Ref: Rob Fisher letter dated January 11, 1982). The manual was corrected in September 1983 prior to loading fuel in Unit 1 in November of 1983. The staff concludes that this allegation has no safety significance.

d. Action Required

None.

6. Task: Allegation or Concern No. 0789

ATS No: RV-84-A-064

a. Characterization

Welded extension bars at the 119 level in Unit 2 were inspected and bought off, but did not meet specifications or drawing requirements.

b. Implied Significance to Design, Construction or Operation

Welded extension for decking supports not meeting specifications or drawings may present a safety hazard due to failure upon loading.

c. Assessment of Safety Significance

The staff on another allegation (reference allegation 995, ATS: RV-84-A-064) conducted an investigation to establish its validity and as a consequence, examined inspection records for the 119 foot level. Several inspection discrepancies were found. One of the three corrective actions taken by Guy F. Atkinson. Co. (GFA) was to reinspect all related field work at the 119 level. Of the 900 items to be reinspected, 42 were found inaccessible due to status of the construction work. The remainder were either found acceptable or minor repairs were made. The inaccessible items were accepted without reinspection by PG&E following an evaluation by the PG&E engineering staff.

d. Staff Position

Based on the significance of identified discrepancies, the staff concludes that there is reasonable assurance that the welded extensions meet the specifications and drawings.

e. Action Required

None.

7. Task: Allegation or Concern No. 0833

ATS No: RV-84-A-064

a. Characterization

A welder disregarded the ISO drawing, field installation instructions, process sheet instructions, weld rod requisition instructions and then incorporated his own welding procedure.

b. Implied Significance to Design, Construction or Operation

The failure of a welder to weld in accordance with the qualified weld procedure could result in a defective pipe weld and the inability of a safety-related pipe system to perform its intended function.

c. Assessment of Safety Significance

The staff reviewed the Pullman Power Products (PPP) internal audit number 85 for 1981, which was the basis for the allegation. Audit number 85 was performed on 10 CFR 50 Appendix B, Criterion XVI, Corrective Action. Audit action request No. 4-4 was the specific finding in the audit report.

The original documentation was retrieved and reviewed from the records vault and all procedures or specifications in effect at the time of the audit were obtained. The field work was shown on PPP isometric drawing No. 23-21 Revision "F". Field welds 477 and 478 attach a stainless steel valve FCV 658 to a 4-inch, schedule 40 carbon steel pipe. These welds were made on February 10 and 11, 1981.

The first of the three-part audit finding stated that the welder disregarded the GTAW/SMAW weld procedure (WP 149) and continued to use GTAW for the weld-out (WP 150). This statement is incorrect. It misrepresents the requirements of weld procedure 149, which permits 1 to 3 passes of GTAW after the root pass. In this case, a consumable insert was used to weld the 0.237 inch wall thickness pipe to the valve. In a weld of this configuration, no more than three GTAW cover passes would be required to complete the weld. Hence, the complete GTAW weld-out per procedure WP 149 is identical to WP 150. The weld procedure change to the process sheet was made by the field engineer on February 10, 1981, which means the change was prior to or at the time of the welding. There was no attempt made by the welder to use "his own" procedure.

In this case, the design of the pipe is not affected by use of either WP 149 or WP 150. The weld procedure specifications, procedure qualification records, and welder qualification records for both procedures were found acceptable.

The second part of the audit finding was that according to the weld rod requisition sheets, welding occurred on February 11, 1981, while the process sheet noted welding was completed on February 10, 1981. ESD-264 requires the PPP inspector to fill all the blocks on the field process sheets and not the individual performing the operation (the preferred method). The method used required the welder to notify the inspector when welding was complete and to enter it on the process sheet. ESD-202 required the weld foreman to fill out the weld rod requisition sheets the day "prior" to the weld being made. A detailed review of the field process and weld rod requisition sheets for both FW 477 and 478 showed that the inspector, not the welder, filled in the completion date as February 10, 1981, a day earlier than the filler requisition date. The process sheet indicated that no welding was performed after the final inspection by the PPP inspector. All welds were subsequently visually inspected and radiographed before acceptance.

The third part of the finding states that the field engineer did not initial, date and explain changes made on the process sheets. After reviewing the FW 477 and 478 process sheets, it was found that the field engineer did sign and date the weld procedure change on both process sheets. The field engineer did not initial and date where the same change occurred redundantly on the same form. There was no written explanation of the change but it was clearly evident the change was from WP 149 to WP 150. ESD-264 paragraph 7.2 only requires explanation of changes and not the reason for the change. Again, from the foregoing evaluation, there was no need to make this change to the process sheet.

The staff reviewed several subsequent audits for the follow-up actions to this audit. 1982 Internal Audit Number 31 dated July 6, 1982, on 10 CFR 50 Appendix B, Criterion XVI, Corrective Action and 1982 Internal Audit Number 35 dated December 1, 1982 on Criterion IX, Special Processes were reviewed to see if similar problems noted in 1981 Audit Number 85 were still detected. Audit 31 was an "unscheduled" audit. It was never completed and was voided by the internal auditor on approximately July 6, 1982. The checklist for Audit 35 has an item No. 4 which was to verify that there were no deviations from the required weld procedures. However, the audit results did not indicate whether the status of work performed was acceptable or not. Subsequent audits examined, such as Audit 118 dated May 27, 1983 on Criterion X, Inspection and Audit 131 dated April 24-30, 1984 on Criterion IX, Special Processes, were complete, accurate and had a checklist of reported results. For example, the response to Audit Action Request No. 5 of Audit 118 showed the corrective action and steps taken to prevent reoccurrence were appropriate and consistent with the finding.

d. Conclusions and Staff Position

The allegation that a welder disregarded the weld procedure and process sheet cannot be substantiated. The staff has concluded that Audit Action Request No. 4-4 of PPP Internal Audit Number 85 appeared to misrepresent the situation as evidenced by the original documentation. The weld procedure was correctly implemented. It appears that the inspector errored in his entry of the weld completion date, not the welder. The changes made to the process sheet were not necessary but, even having been made, they still met the intent of the requirements. There is no apparent safety significance to this allegation.

e. Actions Required

None.

8. Task: Allegation or Concern No. 0995

ATS No: RV-84-A-064

a. Characterization

Inspection work performed under Atkinson's control in 1978 in the northwest corner roof area of turbine building was performed by a questionable inspector.

b. Implied Significance to Design, Construction or Operation

An unqualified inspector could permit unsatisfactory construction work to go unrepaired resulting in structural failure.

c. Assessment of Safety Significance

Upon disclosure of the identity of the alleged unqualified inspector, the staff proceeded to investigate the individual's qualifications and the extent of his participation in the inspection of the construction of the Turbine Building roof.

In accordance with the Guy F. Atkinson Company (GFA) Diablo Canyon Project Specification No. 5442, Quality Assurance - Personnel Q.8-9, the inspector was indoctrinated, trained and certified (effective August 2, 1978) as a Structural Steel Welding and Erection Inspector by GFA's Quality Assurance Manager consistent with GFA's Quality Control Procedure 13. The supporting documentation (references 2, 3, and 4) was reviewed and found acceptable.

Contrary to the allegation, the inspector did not perform any work of record in the turbine building roof area. Inspection records for the roof structure generated by GFA during the period of the inspectors employment at Diablo Canyon were examined and his signature did not appear.

Although the foregoing clearly resolves the specific allegation, further investigation was conducted to establish the validity of the allegation with respect to the work actually performed by the inspector. As a consequence, inspection records for the 119 foot level (location derived from reference 1) were examined for the period of the inspector's employment. Several inspection discrepancies were identified that had also been found and documented by NCR 293 dated April 17, 1979, during an audit of inspection records performed by GFA. The audit was conducted in accordance with GFA - QCP-15 (reference 5). Virtually all of the discrepancies described by the NCR were attributed to the inspector in question. The corrective actions taken by GFA were to: 1) conduct a thorough review of all of this inspector's documentation, 2) reinspect all related field work and, 3) not rehire the individual who had already terminated to return to college.

The inspector was found to have been involved with 900 items and 750 (83%) of these were reinspected and found acceptable (reference 7).

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Of the remainder 108 (12%) were found to have minor deficiencies that were quickly repaired and 42 (5%) were inaccessible due to the advanced state of construction at the time of the GFA audit. Half of the inaccessible items had been ultrasonically tested and accepted by another inspector and, therefore, also accepted by PG&E based upon the availability of test records. The remaining 21 items were accepted by the PG&E engineering staff on the basis that "welds were either not critical to resist loads, or margins between weld size shown on design drawings and weld size required to resist design loads were more than adequate considering limited deficiencies that might exist."

d. Conclusions and Staff Position

The allegation as stated could not be substantiated to the extent that the inspector met all of the requirements established for the job and that no evidence could be found that he had performed inspection work in the northwest roof area. However, further investigation did validate significant deficiencies in the inspector's performance in another location which had been identified by the licensee's QA program and properly dispositioned, including the evaluation of inaccessible welds.

e. Actions Required

None.

9. Task: Allegation or Concern No. 1062

ATS No: RV-84-A-064

a. Characterization

Missized or improperly installed beam clamps have been used to fasten raceway support struts to structural beams.

b. Implied Significance to Design, Construction and Operation

Inadequately supported safety-related raceway could result in degradation or failure of critical power, control or instrumentation circuits during events (e.g., earthquake) that cause abnormal loading of the raceway supports.

c. Assessment of Safety Significance

The sketches provided as part of the allegation indicate that the Unistrut P2785 and P2786 style beam clamps are the items of concern. This is the predominate beam clamp style in use at Diablo Canyon.

This type of clamp is a angled piece of plate steel that captures the foot of a beam between it and the framing channel. The plate is held in place and tightened against the beam by a U bolt which is installed around the framing channel and through the plate (see

Sketch). Vendor catalogs and PG&E drawing 50030 Revision 30 require that these clamps always be used in pairs.

Review of the Unistrut, Power Strut and Super Strut catalogs shows that Unistrut produces two clamp sizes in this style, Super Strut three sizes and Power Strut two sizes. In all cases, the only difference between the different size clamps of each vendor is the U-bolt length. If a clamp with too short of a U-bolt is selected, the clamp will not fit in the application because U-bolt threads will not extend sufficiently beyond the clamping plate to allow installation of the U-bolt nuts. If a clamp with too long of a U-bolt is selected, then it is possible that the U-bolt nuts would reach the end of the threads before the clamp was completely tight.

The selection of the wrong size clamp will not, in and of itself, result in a loose attachment of strut to beam. Loose clamps will only occur if the U-bolt nuts are not properly tightened.

The results of previous NRC raceway support inspections were reviewed and additional inspection of beam clamp installation was conducted. As a part of the NRC inspection of the seismic reverification program, 300 raceway supports were inspected including 24 supports whose design allowed for the use of beam clamps. No loose beam clamps were identified during these inspections.

In response to this allegation an additional 200 beam clamps on raceway supports in both Unit 1 and Unit 2 were inspected for tightness. During this inspection one loose beam clamp was identified. In this case, the proper size U-bolt was employed, however, the nuts were simply not sufficiently tightened. PG&E issued Minor Variation Report No. 3281 on April 2, 1985, to tighten the clamp.

d. Conclusions and Staff Position

The review of vendor information establishes that the size of beam clamp used does not directly affect the tightness of the clamp. It is further concluded from the results of raceway support inspections that loose beam clamps has not been a generic problem at Diablo Canyon.

e. Action Required

None.

10. Task: Allegation or Concern No. 1270

ATS No: RV-84-A-071

a. Characterization

PG&E response that an individual was not aware of orders to stop working on hangers is misleading. Another individual gave the stop work order, but the individual who claims to be unaware of the order should have known about it.

b. Implied Significance to Design, Construction and Operation

The allegation is not sufficiently detailed to allow an assessment of its significance to design, construction and operation. Generally, stop work orders are issued to hold construction while problems with design, materials or procedures are resolved so the amount of rework required is minimized. In this regard, failure to be aware of or to comply with a stop work order would be more likely to have economic significance than safety significance.

c. Assessment of Safety Significance

The portion of the allegation provided to the investigation team did not specifically identify the subject or time period of the order to stop work that is in question. It is assumed that the order in question was a formal stop work order on pipe support installation and that the order could have occurred between March 1983 and April 1984.

The general subject of stop work orders on pipe supports was discussed with a pipe support supervisor and a group engineer of PTGC. They stated that one significant stop work order issued during this interval involved supports that were being evaluated by engineering as part of the seismic reverification program. Pullman Power Products (PPP) was instructed to stop construction on these supports by a memo from G. A. Thomas to H. W. Karner dated August 8, 1983. The intent of this order was to stop work on supports that might be subject to a design change as a result of the reverification program. It was stated that PPP issued stop work orders on the supports in question and hung hold tags on each support. Failure to stop work on any support in this case would have no safety significance, as any design change to a support would be implemented whether or not construction on the support was continued.

The PPP Pipe Support stop work orders were reviewed for the interval in question to audit Pullman's performance in response to stopping work on the supports discussed above and to determine if other irregularities exist that might be the source of the allegation. A sample of the supports identified in the August 8, 1983 memo was selected and it was verified that for each sample case, a corresponding PPP stop work order was issued. During the review of the stop work orders it was noted that one PTGC memo dated September 15, 1983, was referenced by stop work orders through March 1984. This apparent discrepancy in dates was investigated and it was determined that the September 15, 1983 memo instructed PPP of a policy change that could also be the source of the allegation as discussed below.

Pullman Power Products procedures require that construction work on a support be stopped when a new revision of the drawing for that

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support is received. When a new revision is received a stop work order is issued, the old construction package is pulled back from the field, a new construction package is issued and the construction hold is removed. As a result of problems encountered in construction, PTGC instituted a pipe support preinspection program that evaluated new designs for constructibility before they were turned over to PPP. During the time new drawing revisions were under review by the preinspect group, PPP was not formally aware of the new revisions thus construction work on the affected supports continued even though new drawing revisions were onsite. This apparent violation of PPP procedures was noted by preinspect group inspectors. However, since PPP had not received the new revision, their actions were in accordance with written procedures. Initially, no action was taken on this problem because PG&E judged that a minimal amount of rework would be required as a result of construction continuing while the new design revisions were under consideration by the preinspect group. After an instance was identified where significant rework would have been required had construction continued during preinspection, PPP was instructed to stop work on any support when the PTGC preinspect group received a new revision of drawings for that support. This policy change was transmitted by the September 15, 1983 memo from G. A. Thomas to H. W. Karner. Review of the PPP stop work orders from the time of the memo forward indicated that PPP consistently implemented this policy. Even if this were not the case, failure on the part of PPP to stop work on a support would have no safety significance since the support would eventually have to be reworked to comply with the latest drawing revision.

d. Conclusions and Staff Position

No irregularities were noted in the PPP pipe support stop work orders during the interval of March 1983 through April 1984. The two issues that resulted in the majority of stop work orders during this interval were investigated and appear to have been handled properly by PG&E and PPP. Therefore, an allegation that stop work orders during this were not properly implemented or that key individuals were not aware of stop work orders cannot be supported. Furthermore, failure to take proper action on the stop work orders reviewed would have had economic impact, but no safety impact.

e. Action Required

None.

11. Task: Allegation or Concern No. 1381

ATS No: RV-84-A-073

a. Characterization

A nut could not be properly installed on an embedded stud that attaches a main feedwater pipe support to the containment wall. The

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nut was cut in half and tack welded to the base plate. This problem is described in Diablo Canyon Problem Report 1-2335-P.

b. Implied Significance to Design, Construction and Operation

An improperly supported feedwater pipe could result in a loss of feedwater during a transient that places abnormal loads on the support. The pipe support in question is upstream of the main feedwater check valves so that problems with this support would not impair the ability to provide auxiliary feedwater. Nevertheless, the support in question is classified as safety-related by PG&E.

c. Assessment of Safety Significance

Diablo Canyon Problem Report DP-1-2335-P contains a detailed description of the condition that is the source of this allegation. The embedded mounting studs for support 1048/8SL were too short to allow complete thread engagement for the base plate nuts. As a field fix, the nuts were cut in half longitudinally, installed on the studs and tack welded to the base plate. Engineering approval of this configuration was provided on February 14, 1979, in response to the problem report. Approval was based upon a determination that enough threads were engaged to allow the full bolt strength to be developed.

The unusual configuration of the base plate attachment was again noted during final QC inspection of the support. The discrepancy report generated as a result of this inspection (PPP DR 5734) questions the suitability of the nut tack welds since neither the nut material or the welding procedure used could be established. This item was resolved by memo from J. A. Longworth to J. Arnold and R. Tinkle dated January 20, 1984, which recommended that the nut welds be accepted as is, since the welds serve only to prevent the nuts from backing off and are not assumed to add any structural strength to the support.

The partial engagement of the base plate nuts is documented on the as-built drawing for the support and the as-built configuration was accepted by PG&E engineering.

Some confusion about PG&E's ultimate acceptance of the nut tack welds may have resulted from the fact that DR 5734 also identified a number of undersized structural welds on the support. Pipe Support Design Tolerance Clarification Form No. TC-1-14461 indicated that some of these welds were unacceptable as is and should be reworked. The rework required by TC-1-14461 was completed and the resulting support configuration was incorporated into the as-built drawings. TC-1-14461 does not address the nut tack welds.

d. Conclusions and Staff Position

The condition described in the allegation exists in the field. This condition was documented as a discrepancy on two separate occasions and was properly dispositioned on both occasions.

e. Action Required

None.

12. Task: Allegation or Concern No. 1264

ATS No: RV-84-A-071

a. Characterization

PG&E response to GAP allegation No. 259 on walkdown by personnel who marked-up drawings used by Quality Control is misleading. The people were not qualified.

b. Assessment of Safety Significance

The implied safety significance of this allegation is that the quality of safety-related systems may be compromised if they were analyzed and constructed using improper drawings.

c. Assessment of Safety Significance

The source of this allegation was GAP submittal No. 120 dated June 21, 1984, attachment 10, page 12, which states that PG&E's response to GAP allegation No. 259 is misleading regarding qualification of personnel performing walkdowns.

The alleger is concerned that unqualified personnel worked on the drawings and that "those drawings were used for QC inspection work throughout the plant and for engineers to make decisions on the acceptability of design changes."

It is not apparent that the alleger understands the use of drawings that are marked-up as a result of walkdowns. Marked drawings that result from walkdowns are used for updating as-built drawings which are later analyzed and used for QC inspection.

The NRC staff examined the concern regarding qualification of walkdown personnel by: reviewing PG&E instructions and procedures for walkdown inspections; reviewing a sample of ISO drawings used for the walkdowns; and verification of training of individuals who signed the drawings used for walkdowns.

PG&E instruction entitled "Field Reverification Procedure for Piping Isometrics" was prepared in response to NRC Bulletin 79-14 on March 10, 1982, and was revised on April 12, 1982. On May 6, 1982, PG&E engineering assumed control of the procedure, and re-issued it as instruction numbers I-17 for large bore pipe and I-18 for small bore pipe.

The NRC staff randomly selected seven isometric drawings that were marked-up during walk-downs, and recorded the names of individuals who signed the drawings.

Training records were later reviewed, and, in all cases, personnel who performed the walk-downs and signed the drawings had been previously trained in the walkdown procedure. Review of PG&E's 79-14 Training File indicates that over 50 people have been trained in the walkdown procedures. No violations were identified.

d. Staff Position

The staff concludes that personnel who performed walk-downs were adequately trained and qualified to do the work.

e. Action Required

None.

13. Task: Allegation or Concern No. 1397

ATS No: RV-84-A-073

a. Characterization

On diesel generator fuel oil transfer system pipe support (support number 20/85R), a nut is bearing on a weld and half of a shim plate. This condition is not shown on the as-built drawings, but is shown on pipe support tolerance clarification form TC-1-11497.

b. Implied Significance to Design, Construction and Operation

A improperly supported pipe in the diesel fuel oil transfer system could result in eventual failure of one diesel generator following conditions (such as a seismic event) that imposed abnormal loads on the piping system.

c. Assessment of Safety Significance

A copy of the drawings for support 20/85R was obtained and the support was inspected against the drawing. The inspection confirmed that the condition described by the allegation exists. Specifically:

> Line 1-2-J-2599-2" rests on a shim plate that is welded to one of the support cross members. A U-bolt is installed around the line and through holes that were drilled partially through the shim plate and partially through the weld material. U-bolt nuts are installed on the top side of the ship plate to provide for the design spacing between the pipe and the U-bolt. The U-bolt is secured from underneath by a nut and a lock nut on each side. The top nuts rest partially on the shim plate and partially on the weld. These nuts are the source of the allegation.

Contrary to the allegation, the correct version of the hanger drawing for this support details this configuration (Drawing 049318 sheet 110B Section D-D in conjunction with section E-E on sheet

110H). These details were added by either revision 3 or revision 4 of the drawing. In both cases, the Field Correction Transmittal form documents that the as-built configuration has either been factored into the support calculations or that the calculations have been reviewed to verify that the condition does not affect the adequacy of the support.

d. Conclusions and Staff Position

The condition described by the allegation exists in the field, however, PG&E has documented, assessed and accepted the configuration described.

More than enough weld material remains after drilling holes for the U-bolt to insure secure attachment of the shim plate to the support. The incomplete seating provided for the top U-bolt nuts is of no consequence since the nuts are only used to support the U-bolt in order to provide the designed gap between the U-bolt and the pipe. Therefore, the staff agrees that the condition observed does not adversely affect the adequacy of the support.

e. Action Required

None.

14. Task: Allegation or Concern No. 1486

ATS No: RV-84-A-113

a. Characterization

An individual questions the acceptability of capped off lines coming from the reactor vessel support pads.

b. Implied Significance to Design, Construction and Operation

Capped lines could be indicative of incomplete construction work.

c. Assessment of Safety Significance

The piping and Mechanical Drawing (Drawing 50152 Change 3) of the reactor vessel support block was examined to identify pipes coming from the support pads. Twenty four pipes were identified. Inspection of this piping in the Units 2 containment confirmed that lines 2K1696, 2K3003, 2K391, 2K1702, 2K2947, 2K400, 2K1700, 2K2254, 2K395, 2K1698, 2K3008 and 2K393 are capped.

The piping and instrument diagram for the Component Cooling Water System (Drawing 108014 sheet 7) shows these lines as Cooling Water lines to spare Reactor Vessel support coolers and that they are capped per design.

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d. Conclusions and Staff Position

The capped lines coming from the reactor vessel support pads are for spare equipment and are capped per design.

e. Action Required

None.

15. Task: Allegation or Concern Nos. 1566 and 1567

ATS No: RV-84-A-115

a. Characterization

Welders worked without shielding gas flow meters and incompatible meters.

b. Implied Significance to Design, Construction or Operation

Welds made without shielding gas flow rate information or inaccurate information could possibly result in oxidized weldments, with lower mechanical and physical properties of the base material, thus not meeting the original design criteria.

c. Assessment of Safety Significance

During an audit of welder performance by Pullman Power Products Quality Assurance on June 4, 1984, it was discovered that a welder was using a flowmeter that was not identified as an acceptable flowmeter in weld procedures ESD-213 and ESD-219. Further investigation by Pullman revealed that improper and uncalibrated pressure regulators were also in use. These deficiencies were documented by Pullman Power Products on Deficient Condition Notice (DCN) Number 96-058, dated June 7, 1984. Pullman Power then prepared Deficiency Reports (DR's) 8657 and 5946, and submitted them to PG&E for disposition.

PG&E's investigation resulted in a revision to PPP Procedures ESD-213 and ESD-219. The revisions included a description of and instructions for the use of additional types of flowmeters, including those found during the audit. Supplementary instructions were issued to all welders and QC personnel were indoctrinated in proper flowmeter and regulator use.

PG&E investigated regulator calibration requirements with the manufacturer, and reviewed the ASME code, Section IX. The ASME code addresses the shielding gas flow rate as a "non-essential" variable. Because of this, changes in gas-flow were deleted from the PPP ESD's, and the existing welds were accepted.

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d. Conclusions and Staff Position

The allegation that welders were using improper flowmeters and uncalibrated regulators is substantiated. However, the staff further concludes that PG&E acted properly in the corrective action taken to resolve the situation of the use of uncalibrated weld shielding gas pressure regulators and incorrectly matched flowmeters to regulators by revising PPP's welding procedures ESD-213 and ESD-219 to reflect conformance to ASME code Section IX which considers the shielding gas flow rate for manual gas tungsten arc welding as a non-essential variable. All welds performed required NDE assuring weld soundness. This allegation, therefore, has no safety significance.

e. Actions Required

None.

16. Task: Allegation or Concern No. 416

ATS No: RV-84-A-062

a. Characterization

Inconsistent weld acceptance standards were used by day and night shift inspectors inspecting structural steel welds for the Guy F. Atkinson Company.

b. Implied Significance to Design, Construction and Operation

Inconsistent standards could have resulted in unacceptable welds being accepted. This could cause structural steel welds to fail under abnormal loads if weld strength is less than assumed by the design.

c. Assessment of Safety Significance

Exhibit 1 of Attachment 10 to the GAP letter indicates that one example of the night shift requiring rework on welds accepted by day shift inspectors is excess reinforcement on stiffener plates 3 and 5 on column 14. Review of weld inspection records indicated that column 14-A was inspected on the date in question by the inspector identified in Exhibit 1. Stiffener plates 1 through 16 on column 14-A and stiffener plates 7, 8, 15 and 16 on column 12.1-A were inspected as part of the investigation into this allegation. No evidence of excess reinforcement was noted. Thus, the example cited does not support the allegation.

To address the question of inconsistent inspection standards, two thousand two hundred and fifty (2250) structural steel weld inspection records were reviewed for 1855 welds reflecting the work of 22 different weld inspectors to determine if any groups of inspectors had significantly different weld reject rates than other groups. The records reviewed were from two groups. One group was randomly selected from the structural steel welding records for the turbine building. The second group was selected to include the records for the stiffener plate welding referred to in exhibit 1 of the allegation. The records encompassed the time period June 1978 through August 1979, thus spanning several months before and several months after the date of exhibit 1. Of the 2250 inspection records reviewed, 126 (5%) were rejects. Five inspectors accounted for all of the rejects. The bases for these rejections were reviewed to determine if they were attributable to different inspection standards.

Of the 126 rejects found in the sample, 111 resulted from reinspection of 395 welds that had been originally accepted but which subsequently cracked at the ends as documented by NCR's 243 and 313. The resolution of these NCR's required grinding out the weld cracks, visually inspecting the welds and conducting liquid penetrant testing to insure no cracked weld material remained to serve as a starting point for further crack growth. All welds that were reinspected were visually acceptable. The rejects resulted from the liquid penetrant testing. Since the circumstances surrounding these rejections are significantly different from the other weld inspections reviewed, the high reject rate in these cases clearly result from circumstances other than acceptance criteria. The reject rates for the two inspectors who conducted the reinspection were roughly the same.

The remaining 1855 weld inspections reviewed resulted in 15 rejects (<1%) by three inspectors. Seven of the rejections were by a single inspector who conducted 906 of the inspections in the sample. This represents a rejection rate of less than one percent, which is not clearly inconsistent with the other inspectors rejecting no welds out of a much smaller number of inspections. The eight remaining rejects were by two inspectors who inspected a total of 52 welds. It could not be determined if both of these inspectors were on the night shift. The eight rejects occurred on three joints, therefore, it appears that the relatively large percentage of rejects for these two inspectors resulted from the same welder making more than one reject weld on a joint.

To verify that different acceptance criteria did not result in welds being more readily accepted by one group than another, the productivity rate for two of the inspectors that inspected a large percentage of the welds in the sample, were examined to verify that no more than a credible number of welds per day had been inspected by these individuals. It was determined that one inspector had accepted a very large number of welds in one day. Review of these welds, however, indicated that all of the welds were grouped together so that it was possible to inspect the number of welds indicated.

d. Conclusions and Staff Position

The specific column referred to in the allegation as an example of unacceptable work being accepted by day shift showed no indication

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of excess weld reinforcement as alleged. Review of a large sample of weld inspection records did show differing weld rejection rates by different inspectors, but in all cases the higher rejection rates noted could be attributed to factors other than different acceptance standards. No evidence was noted that different standards resulted in inspection of more than a credible number of welds per day by an inspector. Therefore, it was not clear that there was any group of inspectors (day or night shift) that had higher rejection rates due to differing acceptance criteria. Thus, the allegation of differing acceptance criteria between day and night shifts cannot be substantiated.

e. Action Required

None.

17. Task: Allegation or Concern No. 1543

ATS No: RV-84-A-114

a. Characterization

An individual feels that PG&E made false statements that led to the resolution of previous allegations regarding welder qualification test surveillance. Specifically, the existence of welder qualification records referenced by a J. P. Watson affidavit presented before the Atomic Safety and Licensing Appeal Board is questioned.

b. Implied Significance to Design, Construction and Operation

Lack of adequate welder qualification test records would impair the traceability of weld quality for any welds made by welders lacking adequate qualification records, invalidating the acceptance of these welds. As a result some of the accepted welds might fail under abnormal loading conditions because they lack the structural strength assumed by the design.

c. Assessment of Safety Significance

The allegation stems from apparently conflicting testimony regarding welder qualification records that was given by J. P. Watson on two different occasions. In the ASLB affidavit, it was indicated that records of fitup, root pass, filler pass, final visual and bend test had been reviewed for a group of welders. In subsequent testimony during a Department of Labor hearing Mr. Watson indicated that there were no permanent records of examinations conducted at qualification weld hold points.

The process used by Pullman Power Products (PPP) to conduct and document welder qualification tests was reviewed to determine what documentation of qualification tests was generated and maintained. Welder performance qualification is controlled by PPP procedure ESD 216. This procedure requires the QC Welding Supervisor to supervise welder performance qualification testing and document the results of the guided bend tests or radiography used to determine the acceptability of the qualification weld. These requirements and the documentation generated and maintained by PG&E fulfill the welder qualification requirements of ASME Code Section IX Article III, QW 301.4.

Discussions with a PPP mechanical engineer indicate that it was also standard practice for PPP QC Welding Supervisors to inspect the qualification weld progression at selected hold points, usually fit up, root pass and final visual inspection. The results of these inspections were maintained in informal notes by the Welding Supervisor, but were not maintained as permanent formal Diablo Canyon QC documents.

d. Conclusions and Staff Position

The apparent conflict in testimony seems to result from Mr. Watson referring on one hand to records consisting of informal notes and on the other hand to formal permanent records. Therefore, no real inconsistency between the statement that (informal) records of QC inspection for fitup, root pass, filler pass, final visual and bend test were reviewed and the statement that (formal) permanent records of these inspections do not exist. Therefore, the allegation that PG&E made false statements regarding welder qualification test documentation cannot be substantiated.

Furthermore, the welder qualification records maintained by PG&E fully comply with the ASME requirements for such records. Therefore, failure to maintain records of inspections conducted at hold points during the qualification testing has no safety significance.

The specific questions raised in the alleger's affidavit are addressed as follows:

Are inspection records of welder qualification testing required at nuclear power facilities?

> Yes, however, the ASME code only requires that the essential variables, test results and background data be maintained as records of welder qualification. The welder qualification records maintained by PG&E satisfy these requirements.

Does the welder qualification test have hold points that must be inspected before the test can be allowed to proceed?

> No, although inspection at hold points was standard practice by the PPP QC Welding Supervisors, it is not required by either the ASME Code or by the written PPP procedures.

If a QC inspector performed an inspection of a mandatory hold point, would that inspector be required to document the results of such an inspection?

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No, as discussed above neither the inspection hold points nor documentation of the results of hold point inspections is mandatory.

e. Action Required

None.

18. Task Allegation or Concern No. 169

ATS No: RV-84-A-022

a. Characterization:

Pullman failed to conduct support welds as required by procedure and QA wrongfully approved the technique.

b. Implied Significance to Design, Construction, or Operation

Welds made without the proper procedure could result in improperly made welds in critical areas.

c. Assessment of Safety Significance

The alleger stated that two W14x90 wide flange beams were welded together on support nos. 2/45R and 2/49R by use of an unqualified welding technique. It was stated that Pullman welding procedure specification (WPS) 7/8 was used to join steel shapes without the required backing bar in place of which back-gouging was performed and the Pullman QA/QC Manager wrongly approved the technique utilized.

The staff reviewed packages from support nos. 2/45R and 2/49R and Pullman's WPS 7/8 to evaluate welds in question. The joint type is a groove butt in which a backing bar is placed to ensure full penetration when welding. Pullman's General Field Support Process Sheets for these supports indicate a hold point after back-gouging to verify sound weld metal was attained from the back side before welding the back side. Both techniques are approved by the AWS and ASME codes. Both techniques achieve the same purpose: to obtain full penetration at the root. The AWS Code has both of these particular weld joint types as prequalified in their Structural Welding Code D1.1, but the omission or inclusion of a backing bar is an essential variable in which a WPS has to be requalified if the weld joint was not prequalified. ASME Section IX addresses backing bars as nonessential variables requiring no requalification of a WPS.

Pullman's WPS 7/8 closely resembles ASME Section IX but does not state that Section IX is to be used as a supporting document when a interpretation is required. Therefore, technically the alleger was correct in stating that the support welds made without a backing bar was performed without a properly qualified procedure because back gouging was not addressed on WPS 7/8. On March 12, 1984, WPS 7/8 was revised to allow for back grinding and back welding.

Pullman's QA/QC Manager has no recollection in approving the use of backgouging as an alternative to the use of a backing bar for welds in question.

d. Staff Position

The staff concludes that no structural deficiencies resulted from the change of welding technique because full penetration of the root was achieved in both cases.

e. Action Required

None.

19. Exit Interview

Mr. M. Tressler, was informed of the results of these inspections by telephone on July 17, 1985.

Docket Nos. 50-275 and 50-323 NOV 18 1985

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: J. D. Shiffer, Vice President
Nuclear Power Generation, Licensing

Gentlemen:

Subject: NRC Inspection - Diablo Canyon Units 1 and 2

This refers to the routine inspection conducted by Mr. C. A. Hooker of this office on October 28 - November 1, 1985, of activities authorized by NRC License Nos. DPR-80 and DPR-82 and to the discussion of our findings held by Mr. Hooker with Mr. Thornberry and other members of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

Original signed by
F. A. Wenslawski

F. A. Wenslawski, Chief
Emergency Preparedness and Radiological
Protection Branch

Enclosure:
Inspection Report Nos. 50-275/85-33 & 50-323/85-31

cc w/enclosure: S. D. Skidmore, PG&E
R. C. Thornberry, PG&E (Diablo Canyon)
P. A. Crane, Jr., PG&E
D. Taggart, PG&E (Diablo Canyon)
R. Weinberg, PG&E (Diablo Canyon)
State of CA
Sandra Silver (Report only)

bcc w/enclosure: Mr. Martin; Mr. Faulkenberry; Mr. Cook; Resident Inspector
bcc w/o enclosure: LFMB

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U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/85-33 and 50-323/85-31

Docket Nos. 50-275 and 50-323

License Nos. DPR-80 and DPR-81

Licensee: Pacific Gas and Electric Company
77 Beale Street
Room 1435
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: San Luis Obispo County, California

Inspection conducted: October 28 through November 1, 1985

Inspector: CA Hooker 11/18/85
C. A. Hooker, Radiation Specialist Date Signed

Approved by: GP Yuhas 11/18/85
G. P. Yuhas, Chief Date Signed
Facilities Radiological Protection Section

Summary:

Inspection on October 28 through November 1, 1985 (Report Nos. 50-275/85-33 and 50-323/85-31)

Areas Inspected: Routine unannounced inspection of licensee action on previous inspection findings; follow-up on allegation RV-85-A-0056; external exposure; and internal exposure. Inspection procedures 83724 and 83725 were covered. The inspection involved 36 hours onsite by one NRC inspector.

Results: No violations or deviations were identified in the five areas inspected.

3. Allegation Followup

(Closed) Allegation Number RV-85-A-0056

On August 30, 1985, Region V received an anonymous allegation which specified, in part, that a certain PG&E management individual had entered the Radiological Controlled Area (RCA) without logging in or receiving any dosimetry. The alleger's concern was examined during the inspection through personnel interviews and review of licensee documents.

The allegation stemmed from an occurrence in the access area to the RCA on May 7, 1985, when a management individual entered the RCA check out area through the egress portal without logging in or receiving a self reading pocket dosimeter. Based on discussion with the individual, he had inadvertently entered the RCA checkout area, did not have any intention on going beyond the checkout area, and was wearing his TLD badge. The C&RP log book for May 7, 1985, noted the occurrence and stated that this individual was counseled at the time of the incident, surveyed himself, and exited the RCA. This appeared to be an isolated incident of minor safety significance, did not appear to be a willful act, and prompt corrective action was taken by the licensee. The inspector had no further questions with respect to this matter.

No violations or deviations were identified.

4. External Exposure

The inspector examined licensee records, observed workers in the RCA, and performed independent radiation measurements to determine the licensee's compliance with NRC requirements.

A. Procedures Examined

The following selected procedures were examined for implementation of the licensee's external radiation exposure control program:

NPAP C-200	Radiation Protection Programs;
RCS-1	External Radiation Dose Control;
RCS-3	Personnel Contamination Control;
RCS-4	Control of Access;
RCS-8	Reporting and Recordkeeping;
RCP G-2	Personnel External Dosimetry and Control;
RCP G-4	Personnel Decontamination and Evaluation;
RCP G-5	Control of Access for Radiation Protection Purposes;
RCP G-7	Radiation and Contamination Surveys;
RCP G-12	Entry Into Very High Radiation Areas - Greater Than 100 Rem/Hour;
RCP D-1	External Dosimetry Requirements and Records;
RCP D-2	Continuous Coverage; and
RCP D-9	TLD/Film Badge Issue and Control.

Procedure RCP G-4, "Personnel Decontamination and Evaluation", Revision 3, dated 9/12/85, has been amended to include methodology for assessing the radiation dose to the skin, whole body, and

NOV 26 1985

Docket No. 50-275, 50-323

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation, Licensing

Gentlemen:

Subject: NRC Inspection of Diablo Canyon Units 1 and 2

This refers to the inspections conducted by Mr. J. F. Burdoin of this office during October 7-November 1, 1985, of activities authorized by NRC License Nos. DPR-80 and DPR-81, and to the discussion of our findings with Mr. R. Thornberry, and other members of your staff on November 1, 1985.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

/S/

D. F. Kirsch, Deputy Director
Division of Reactor Safety and Projects

Enclosure:
Inspection Report Nos. 50-275/85-35, 50-323/85-33
cc w/enclosure:
S. D. Skidmore, PG&E
R.C. Thornberry, PG&E (Diablo Canyon)
P.A. Crane, Jr., PG&E
D. Taggart, PG&E (Diablo Canyon)
R. Weinberg, PG&E (Diablo Canyon)
State of Ca Sandra Silver
bcc:RSB/Document Control Desk (RIDS)
Mr. Martin, Mr. Faulkenberry
Resident Inspector
Green, Pink, File, Document File

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PDR ADOCK 05000275
Q PDR

~~Burdoin~~
11/22/85

Dodds
11/22/85

Chaffee
11/21/85

Kirsch
11/26/85

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/85-35, 50-323/85-33

Docket Nos. 50-275, 50-323

License Nos. DPR-80, DPR-81

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection conducted: October 7-November 1, 1985

Inspector: J. F. Burdoin 11/22/85
J. F. Burdoin, Reactor Inspector Date Signed

Approved by: R. T. Dodd 11/22/85
R. T. Dodds, Chief, Reactor Project Section 1 Date Signed

Summary:

Inspection during period of October 7-November 1, 1985 (Report Nos. 50-275/85-35 and 50-323/85-33.

Areas Inspected: Unannounced inspection by one regional inspector of open items consisting of followup inspection items, Part 21 Reports, Generic Letters and IE Notices and followup of allegations by NRC contractors. Inspection procedures numbers 92700, 92701, 92704, and 92705 were used as guidance for the inspection. The inspection involved 78 inspection hours by one inspector and approximately 120 hours by contract personnel.

Results: No items of noncompliance or deviations were identified.

a. Task: Allegation or Concern No. 572 (ATS No: RV-84-A-052)

1) Characterization

PG&E has stifled Pullman Power Power Products (PPP) inspectors reports of faulty Bosten-Bergen and American Bridge Welds, by directing them not to issue discrepancy reports.

2) Implied Significance to Design, Construction, or Operation

Faulty welds in components received from vendors, if uncorrected, could possibly result in failure of safety-related systems.

3) Assessment of Safety Significance:

Staff review of source document, GAP 2/2/84 letter, #102-104 indicates that PPP inspectors were issued memoranda to stop issuing Discrepancy Reports (DRs) on "shop" welds. The terminology "shop" is used to describe purchased components that were welded by outside vendors. The allegation cites a PG&E memo dated April 3, 1980, authorized by Marvin (SIC) Leppke as a basis for the conclusion that PG&E stifled PPP inspectors. The allegation further states that, in 1982, PG&E instructed Pullman to delete those welds from the formal walkdown program.

The NRC staff reviewed the April 3, 1980 memo issued by Mr. M. R. Leppke. The staff was unable to find any direction that PPP should stop issuing discrepancy reports on shop welds. The context of this letter indicates that an extensive program had been underway to investigate, evaluate and repair rupture restraint welds. The letter states that sufficient shop weld data had been obtained to allow the engineering department to review the data and include its conclusions in the final rupture restraint report.

4) Conclusions and Staff Positon

The allegation that PG&E stifled attempts by PPP inspectors to report and correct faulty vendor welds cannot be substantiated

5) Action Required:

None.

b. Task: Allegation or Condern No. 993 (ATS No: RV-84-A-076)

1) Characterization

(Similar to allegations 353 through 359 for field welds 197-212, concerning welding QC at Diablo Canyon.) It was alleged that several college students working as QC Inspectors were unqualified. It was further alleged that weld procedure code 200 was "grossly inadequate".

2) Implied Signifiance to Design, Safety or Construction

Unqualified inspectors or inadequate weld procedures could possibly result in unsatisfactory construction of safety-related systems or components.

3) Assessment of Safety Significance

The source documents were reviewed. The allegers testimoney only provided generalities such as "the quality controls at Diablo Canyon leave a lot to be desired" and"it is a real horrendous mess". This document lacks the substance or details necessary to conduct a viable investigation.

Subsequent testimony identifies three individuals who were allegedly not qualified to be inspectors. The staff researched Pullman Power Products Company training and certification records for these three inspectors. Their records indicate that these inspectors held certificates of qualification that were issued upon completion of training and successfully passed written examinations for nuclear pipe welding and visual inspection.

The testimoney further alleges that another indivdual wrote welding procedures for Pullman Power Products Company and that "in no way was he qualified for this task". A search of Pullman Power Products Company records failed to identify this person as ever having been employed at Diablo Canyon. The only person with the same name employed at Diablo Canyon that was even remotely connected with welding was qualified as a visual welding inspector.

It was also alleged that the quality of work performed by the production workers at Diablo Canyon was "really poor". This allegation was made by another alleger, whose allegation was resolved on allegation no. 1543, ATS No. RV 84A114.

A May 7, 1984 letter from another alleger to the NRC expresses opinions that weld procedure code 200, Specification P12B-P1-K1-4F-SMAW-6G was "grossly inadequate', that failure analysis conclusions were incomplete, that "significant factors" were not addressed, that weld procedure code 200 "indicated a basic misunderstanding of Preheat theory" and that radiographic examination used by itself was not adequate to verify weld integrity. This allegation appears to be very similar to earlier allegations 353-359 concerning weld procedure code 200 for field welds 197-212. It was concluded previously that weld procedure code 200 and specification P12B-P1-K1-4F-SMAW-6G were written, qualified and approved in accordance with the ASME Code, Section IX, Paragraph QW 200.2, 1983 edition, and Q-10 in the 1971 edition, which is the accepted standard for use in the nuclear industry.

4) Conclusion and Staff Position:

Review of Pullman Power Products Company records indicate that inspectors were indeed trained, tested and certified before they were permitted to perform weld inspection. This conclusion is further supported by the results of allegations 995 and 378, which are also concerned with inspector training and qualification. The allegations can not be substantiated.

5) Action Required:

None.

c. Task: Allegation or Concern No. 1009 (ATS No: RV-84-A-064)

1) Characterization

An individual believes that engineers who questioned suspect assumptions were transferred to Unit 2. Cooperative engineers plus new recruits were assigned to Unit 1.

2) Implied Significance to Design, Construction and Operation

Assignment of engineers based upon attitudes could result in a insufficient level of experience in the groups assigned to one of the units. An inadequate experience level could result in failure to detect safety significant design or installation errors.

3) Assessment of Safety Significance

Review of previous, similar allegations by the same individual led to the conclusion that the allegation pertains to the split up of the Onsite Project Engineering Group (OPEG) small bore pipe support group that occurred in January 1983. This reorganization created Unit 1 and Unit 2 areas within the small bore pipe support group and divided each area in to three squads. Previously there had been no subdivisions within the group.

The reasons for this reorganization and the basis for the individual assignments to the two groups were discussed with the individuals who were, at the time, the assistant onsite project engineer and the small bore pipe support group supervisor. They both indicated that, at the time of the reorganization, a consistent increase in work load was being experienced due to the fact that both units were entering a construction phase that entailed a large amount of small bore pipe support work. The group was reorganized to provide for better management of the increased staffing levels necessary to support the required level of effort. The assignments to the two groups were made by the group supervisor in conjunction with the Unit 1 and Unit 2 area leaders plus the squad leaders who were onsite at the time.

Discussions with the individual who was the group supervisor indicated that roughly the same experience level was required of all group members, however, there were some individuals in the group who had been employed at the Diablo Canyon Project for longer than others, thus these individuals were more familiar with project procedures and personnel. It was his intention that the reorganization result in each squad having a few individuals with Diablo Canyon Project experience.

To determine if the ultimate squad composition reflected this intent, the composition of each squad was reviewed to identify those individuals who had been with the small bore pipe support group since its inception. Each of the squads, both in the Unit 1 and Unit 2 areas, had between two and three engineers who met this criterion.

4) Conclusions and Staff Position

All of the engineers in both the Unit 1 and Unit 2 small bore pipe support areas were required to have basically the same level of industry experience. Review of the individuals assigned in each of the area indicated that the engineers with the most Diablo Canyon experience were divided roughly equally between the Unit 1 and Unit 2 areas. Therefore, no safety significance can be attributed to this allegation.

5) Action Required

None.

d. Task: Allegation or Concern No. 1399 (ATS No. RV-84-A-073)

1) Characterization

Base plates of support members on Unit 2 RHR containment sump recirculating lines to RHR Pump have partial penetration weldments.

2) Implied Significance to Design, Construction or Operation

The implied safety significance is that base plates improperly welded may not support the designed loading.

3) Assessment of Safety Significance

The staff, after investigation, identified two pipe supports which have base plates with sections added and welded as described by the allegation. These were Hangers 22-11R and 413-76R.

Hanger 22-11R & 413-76R are similar in which a 3/8" plate was located between two other base plates and welded with a square groove weld joint, requiring full penetration. The PPP as-built was generated to modify support per Stress Analysis No. G-003-04, Rev. 1 by Gathersburg Power Division (GPD). This new work consisted of gusset plates and other non-relevent modifications.

A field inspection substantiated the allegation. One hanger had the weld wrapping around the plate making it difficult to determine weld type but the other showed a partial penetration weldment. PG&E engineering staff reanalyzed the hangers leaving out the welds and found them to meet the safety factor requirements. Therefore, in these two isolated cases no structural safety significance exists.

The inspector in preparing a FIR (Field Information Request) for GPD mistakenly called out the wrong weld type. To verify that was an isolated case, all the inspectors records were reexamined. The records indicated this individual was a cognizant inspector and aware of details. The individual was at Diablo Canyon for approximately one year. In that time, he performed approximately 450 inspections of which only 22 were of a similar type penetration weld and only 7 of the 22 were structural in nature. These were reinspected and the welds were correctly called out.

4) Staff Position

The situation in which a wrong weld was called appears to be an isolated case of no structural safety significance.

5) Action Required

None.

e. Task: Allegation or Concern No. 1485 (ATS No: RV-84-A-113)

1) Characterization

Unistrut and Thunderbird clamps used to support hydrogen gas tubing do not provide adequate support.

2) Implied Significance to Design, Construction and Operation

Inadequately supported hydrogen lines would present a potential fire hazard if the lack of support resulted in line rupture under conditions that imposed abnormal loads on the tubing (e.g. turbine trip).

3) Assessment of Safety Significance

The hydrogen lines for Unit 2 were inspected and it was confirmed that Unistrut P2026 clamps have been used in some places to support 1/2 inch pipe and Thunderbird saddle clamps have been used in some places to support instrument tubing. Discussions with PG&E engineering indicated that they have determined that accelerations on the order of 14g would be required to load the Unistrut clamps beyond their design load. This far exceeds the maximum loading that could be imposed by an credible source of dynamic loading. PG&E indicated that similar results would be expected for the Thunderbird clamp applications. Independent assessment of the loads required to exceed design strength of the clamps concluded that PG&E's value of 14 g was conservative.

4) Conclusions and Staff Position

The Thunderbird and Unistrut clamps being used to support main generator hydrogen lines will withstand significantly greater loads than they will ever be expected to experience. Therefore, this allegation has no safety significance.

5) Action Required

None.

f. Task: Allegation or Concern No. 1493 (ATS No: RV-84-A-114)

1) Characterization

Pullman used pipe welding procedures on structural steel and when the problem was identified Pullman wrote a memo which revised the ESD which legalized the existing practice.

2) Implied Significance to Design, Construction or Operation

Welds made utilizing the wrong weld procedure may not meet the designed load.

3) Assessment of Safety Significance:

The alleger stated that full penetration single bevel welds performed on structural steel utilized a 37-1/2° bevel which was feasible for pipe. When this was brought to the attention of Pullman Q.A. a memo was written to revise the weld procedure.

ASME Section IX, Welding and Brazing Qualifications, does not consider a change on weld joint angle for SMAW or GTAW as an essential variable, therefore, requalification of the weld procedure if an angle change is made is not required.

4) Staff Position:

The staff concludes that the weld joint angle change made by Pullman Q.A. was performed correctly as per the governing Code.

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5) Action Required:

None.

9. EXIT MEETINGS

The inspector conducted exit meetings on October 11 (an interim meeting) and November 1 with the Plant Manager, Plant Superintendent, and other members of the plant staff. During these meetings, the inspector summarized the scope of the inspection activities and reviewed the inspection findings as described in the report. The licensee acknowledged the concerns identified in the report.

JAN 07 1986

Docket Nos. 50-275 and 50-323

Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Attention: Mr. J. D. Shiffer, Vice President
Nuclear Power Generation

Gentlemen:

Subject: NRC Inspection of Diablo Canyon Units 1 and 2

This refers to the routine inspection, conducted by Messrs. M. M. Mendonca, M. L. Padovan, T. M. Ross, and T. J. Polich, of this office during the period of November 10 through December 14, 1985. This inspection examined your activities as authorized by NRC License Nos. DPR-80 and DPR-82. Discussions of our findings were held with Mr. R. C. Thornberry, and other members of your staff, at the conclusion of the inspection.

Areas examined during this inspection are described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

No violations of NRC requirements were identified within the scope of this inspection.

In accordance with 10 CFR 2.790 (a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

Original signed by
D. F. Kirsch
D. F. Kirsch, Deputy Director
Division of Reactor Safety
and Projects

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PDR ADOCK 05000275
G PDR

Enclosure:
Inspection Report Nos. 50-275/85-39 and 50-323/85-37
cc w/enclosure:
S. D. Skidmore, PG&E
P. A. Crane, Jr., PG&E
R. C. Thornberry, PG&E (Diablo Canyon)
D. A. Taggert, PG&E (Diablo Canyon)
R. S. Weinberg, PG&E (Diablo Canyon)
State of California
Sandra Silver (Report Only)
bcc: RSB/Document Control Desk (RIDS)
Mr. J. Martin; Mr. B. Faulkenberry; G. Cook; Resident and Project Inspector

MMendonca:dh	MPadovan	TRoss	TPolich	RDodds	AChaffee	DKirsch
~~12/ /85~~	~~12/ /85~~	~~12/ /85~~	~~12/ /85~~	~~12/ /85~~	~~12/ /85~~	~~12/ /85~~
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U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos: 50-275/85-39 and 50-323/85-37

Docket Nos: 50-275 and 50-323

License Nos: DPR-80 and DPR-82

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspection at: Diablo Canyon Site, San Luis Obispo County, California

Inspection Conducted: November 10 through December 14, 1985

Inspectors:
R T Dodds for 1/3/86
M. M. Mendonca, Sr. Resident Inspector Date Signed

R T Dodds for 1/3/86
M. L. Padovan, Resident Inspector Date Signed

R T Dodds for 1/3/86
T. M. Ross, Resident Inspector Date Signed

R T Dodds for 1/3/86
T. J. Polich, Resident Inspector Date Signed

Approved by:
R T Dodds 1/3/86
R. T. Dodds, Chief, Reactor Projects Section 1 Date Signed

Summary:

Inspection from November 10 through December 14, 1985 (Report Nos. 50-275/85-39 and 50-323/85-37)

Areas Inspected: This inspection included routine inspections of plant operations, maintenance and surveillance activities, follow-up of on-site events, open items, LERs, and licensee plans for coping with a strike, as well as selected independent inspection activities. Additionally, inspection of the Unit 2 power ascension startup program continued. Inspection Procedures 71707, 30703, 71710, 62703, 61726, 93702, 72582, 70302, 70301, 70300, 72583, 61711, 50095, 92709, 92701, and 92700 were applied during the report period.

This inspection effort required 167 inspector-hours for Unit 1, and 260 inspector-hours for Unit 2 by four resident inspectors. The inspection began during an off-shift period; approximately 34 hours on Unit 1 and 53 hours on Unit 2 were accomplished during off-shift periods.

Results of Inspection: No violations or deviations were identified.

intervals was verified by the inspectors. The inspectors also ensured corrective actions were established and events were accurately described.

Unit 1: 85-33 and 35

Unit 2: 85-09, 10, 12, 13, and 15

10. Potential Strike of Contract Security Force

The potential for a strike by contract security personnel occurred during this inspection period. The inspector examined the licensee's plans for coping with such a strike. All security posts required by the security plan were addressed by the licensee's plan. The licensee also implemented a test of manning, using only PG&E security force.

The licensee's strike contingency plans appeared to address all required aspects for coping with the strike and only minor problems such as late lunch reliefs occurred during the test manning. The strike has been averted at this time.

No violations or deviations were identified.

11. Followup on Handling of Cardinal Bolt Materials (Closed Allegation Nos. 1664-1677, ATS No. RV-85-A-999)

During the inspection conducted on March 25 - April 26, 1985 (IR 85-16), the inspectors verified that Pullman Power Products' warehouse where all material manufactured by Cardinal Industrial Products was placed on hold was in agreement with Discrepancy Report #9173's disposition. The inspectors verified that the Cardinal Industrial Products material was locked, segregated, and accounted for in their material log book. The inspectors sampled several bins to ensure accountability, correct sizes, correct material, and heat numbers. The inspectors verified that the sampled bins had the correct number of items less any that were conditionally released, correct size of items, and correct heat numbers and material. The inspectors reviewed the log book to ensure traceability of any conditionally released material, and felt that the material could be traced since the log book contained specific information of where the material was to be placed and gave a location as well. The inspectors felt that the Pullman Power Product's warehouse was satisfactory with regard to the Discrepancy Report #9173's disposition.

Subsequent to this inspection, Pacific Gas and Electric Company submitted an updated and final report on Cardinal Industrial Products' (Cardinal) Revalidation Program to the NRC dated July 22, 1985 (DCL-85-248). The report describes the Cardinal's Revalidation Program as being extensive and included the following three items:

1) qualifying of overseas agents and suppliers

2) chemical and physical testing of selected categories of material

3) verifying the completeness of certification documentation for fastener materials supplied to PG&E and PG&E's onsite contractors for use at Diablo Canyon Power Plant (DCPP).

The reviews mentioned above have been completed by Cardinal for DCPP in accordance with their revalidation program.

PG&E had verified Cardinal's implementation of the revalidation program and had concluded that the QA program implementation deficiencies identified by the NRC in IE Information Notice 84-52 did not adversely impact the quality of fastener materials supplied to DCPP. The material met applicable specification requirements and was, therefore, acceptable for use and did not require a report to the NRC pursuant to 10 CFR 50.55(e) or 10 CFR 21.

Allegations closed.

12. Unresolved Item

Inspection report topic 3.c contains an unresolved item. An unresolved item is a finding which requires more information in order to ascertain whether it is an acceptable condition, an open item, a deviation, or a violation.

13. Exit

On December 13, 1985 an exit meeting was conducted with the licensee's representatives identified in paragraph 1. The inspectors summarized the scope and findings of the inspection as described in this report.

APPENDIX C

ALLEGATION REVIEW BOARD MEETING MINUTES

	Board Meeting	RV Memorandum	Allegations	Page
1.	07-26-1984	07-26-1984	1368	C.1-1
2.	05-01-1985	05-01-1985	1656	C.2-1
3.	05-21-1985	05-22-1985	1716, 1717, 1718	C.3-1
4.	06-06-1985	06-07-1985	391, 1209, 1488, 1489, 1491, 1657, 1659, 1660, 1661, 1662, 1663	C.4-1
5a.	06-20-1985	06-21-1985	19	C.5-1
5b.	07-12-1985	07-22-1985	1719	C.5-2
6.	07-26-1985	08-02-1985	120, 233, 247, 248, 271, 272, 273, 278, 469, 570, 580, 588, 631, 632, 1028, 1529, 1583, 1600, 1627, 1628	C.6-1
7.	07-26-1985	07-30-1985	18, 53, 70, 281, 1477	C.7-1
8.	07-26-1985	07-30-1985	220, 221, 793, 794, 1021, 1022, 1108, 1313, 1610, 1623, 1658	C.8-1
9.	08-01-1985	08-01-1985	282, 329, 438, 975, 1097	C.9-1
10.	08-06-1985	08-09-1985	1191, 1192, 1193, 1194, 1588, 1712, 1713, 1714	C.10-1
11.	08-06-1985	08-28-1985	1722, 1723, 1724, 1725	C.11-1
12.	09-25-1985	09-25-1985	425, 731, 943, 1096, 1613	C.12-1
13.	10-28-1985	10-29-1985	786, 1449, 1497, 1625	C.13-1

1045

14.	11-14-1985	11-14-1985	943, 1096, 1686, 1690, 1722, 1723, 1724, 1725	C.14-1
15.	12-06-1985	12-06-1985	283, 395, 407, 419, 436, 437, 757, 774, 779, 780, 782, 804, 910, 913, 996, 997, 1025, 1060, 1226, 1303, 1455, 1468, 1539, 1589, 1617, 1620	C.15-1
16.	12-16-1985	12-16-1985	250, 256, 328, 404, 411, 412, 413, 439, 442, 592, 766, 767, 769, 770, 809, 845, 852, 905, 914, 1000, 1001, 1002, 1014, 1024, 1210, 1259, 1268, 1269, 1271, 1323, 1325, 1420, 1440, 1442, 1445, 1450, 1463, 1470, 1500, 1556, 1578, 1597, 1598, 1599, 1609, 1621, 1622, 1624, 1626, 1629, 1706	C.16-1
17.	01-03-1986	01-03-1986	91, 1015, 1149	C.17-1
18.	01-07-1986	01-07-1986	1678, 1679, 1680, 1681, 1682, 1683, 1708, 1709, 1710, 1711	C.18-1
19.	01-07-1986	01-07-1986	879, 1130, 1277, 1438, 1439, 1441, 1444	C.19-1
20.	02-12-1986	02-14-1986	130, 224, 249, 489, 490, 589, 590, 887, 929, 930, 1217, 1465, 1611, 1656	C.20-1
21.	02-26-1986	02-26-1986	81, 82, 254, 1016, 1017, 1051, 1614, 1619, 1649	C.21-1
22.	03-13-1986	03-14-1986	23, 156, 157, 223, 591, 912, 970, 971, 972, 973, 978, 979, 1109, 1198, 1224, 1445, 1446, 1447, 1448, 1524, 1544, 1546, 1570, 1578, 1579, 1580, 1581, 1601, (continued on next page)	C.22-1

			1603, 1604, 1605, 1606, 1607, 1608, 1612, 1615, 1616, 1618, 1630, 1631, 1632, 1633, 1634, 1635 1637, 1638, 1639, 1640, 1641, 1702, 1717	
23.	04-03-1986	04-03-1986	508, 1224, 1233	C.23-1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

July 26, 1984

MEMORANDUM FOR: File (SG-4-6, Allegation 84-A-0050) (Alleg.# 1365)

FROM: Ross A. Scarano, Director
Division of Radiological Safety and Safeguards Programs

SUBJECT: ALLEGATION PANEL (84-A-0050)

Reference: Memorandum dated June 6, 1984, Schwan to File SG-4-6, Allegation 84-A-0050.

In accordance with the course of action outlined in the referenced memorandum, on June 18, 1984 the PG&E investigator assigned to this case was contacted by C. A. Schwan to obtain additional information concerning this allegation. It was verified that the individual in question had voluntarily terminated on June 9, 1984 under favorable conditions in order to preclude future altercations with the alleger. Apparently the individual has relocated to another state. The investigator confirmed that work assigned to this individual required routine QC verification upon completion, and that his work record and behavior onsite was stable.

Based on this supplemental information, and the original information contained in the referenced memorandum, this matter is considered closed.

The attached letter to the alleger, documenting the status of the matter will be dispatched by the Safeguards and Emergency Preparedness Branch.

Those participating in the original allegation panel on June 1, 1984 concur in this memorandum.

Ross Scarano

Ross A. Scarano, Director
Division of Radiological Safety
and Safeguards Programs

Attachment: As Stated

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

MAY 1 1985

MEMORANDUM FOR: Diablo Canyon Allegation File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION NO. 1656

The below listed Allegation Review Board was convened on May 1, 1985, to examine PG&E's response to Allegation No. 1656. The Board agreed that the licensee had adequately addressed the allegers concerns in response letter DCL-85-118, dated March 20, 1985. The alleger will be informed of the Board's finding and will be furnished a copy of the licensee's reponse.

A. D. Johnson
A. D. Johnson

R T Dodds
R. T. Dodds

DF Kirsch
D. F. Kirsch

A. E. Chaffee

cc: Document Control System
T. Young, Engineering Section
R. Dodds, RV

May 22, 1985

Docket Nos. 50-275/323

MEMORANDUM FOR: File - DCAF

FROM: Allegation Review Board

SUBJECT: ALLEGATION REVIEW BOARD MEETING

Date of Meeting: May 21, 1985

Facilities: Diablo Canyon Units 1 and 2

An allegation review board, comprised of the below identified individuals, was convened on May 21, 1985, to examine the allegations received by the Office of Investigation. The Board determined that these allegations are assigned to OI for resolution. The allegations are numbered as follows:

ATS#	Region V#
RV-85-A-0025	1716
RV-85-A-0026	1717
RV-85-A-0027	1718

The Board further determined that Allegation #1716 above is closed by OI and thus is considered closed by RV. Also, Allegation #1718 does not involve a NRC Regulatory requirement and is being closed by OI by referral to the appropriate local enforcement authority.

AE Chaffee
A. E. Chaffee

R T Dodds
R. T. Dodds

D.F. Kirsch
D. F. Kirsch

R. Meeks, OI Advisor
to the Board

A. D. Johnson
A. D. Johnson
Enforcement Officer

M D Schuster
M. D. Schuster

cc: Board Members
Allegation Files: RV-85-A-0025
RV-85-A-0026
RV-85-A-0027
T. Young, Chief, Engineering Section ✓

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

JUN 7 1985

Docket Nos. 50-275/323

MEMORANDUM FOR: File - DCAF

FROM: Allegation Review Board

SUBJECT: ALLEGATION REVIEW BOARD MEETING

Date of Meeting: June 6, 1985

Facilities: Diablo Canyon Units 1 and 2

An allegation review board, comprised of the below identified individuals was convened on June 6, 1985, to examine the status of allegation numbers

391, 1209, 1488, 1489, 1491, 1657, 1659, 1660, 1661, 1662, and 1663.

The Board determined that these allegations were closed as follows:

DCAF No.	Comment
391	The technical issues were resolved in an ARB conducted on July 12, 1984. This allegation lacks specificity regarding the alleged inadequacies in management's commitment to quality and, therefore, is considered closed.
1209	The allegation involves a difference in the date of contractor response to the alleger, but does not contest the adequacy of the response. Accordingly, the Board does not consider the date of the response to be that significant or material to the issue. Therefore, this allegation is considered closed.
1488, 1489 and 1491	These allegations are closed since they are duplicates of allegations derived from the alleger's affidavit submitted with the November 1, 1984, CAP petition, allegation numbers 1513 through 1518, currently being dispositioned by NRR.
1657	DCL-85-177 dated May 1, 1985, appropriately addresses the issue.

JUN 7 1985

DCAF No.	Comment
1659, 1660 1661, 1662 and 1663	DCL-85-160 dated April 22, 1985, appropriately addresses these issues.

Talbot Young Jr.
T. Young, Jr.

R T Dodds
R. T. Dodds

D.F. Kirsch
D. F. Kirsch

O. C. Shackleton
O. C. Shackleton

cc: Engineering Section Chief

bcc: Document Control Desk (RIDS)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

JUN 21 1985

MEMORANDUM TO FILE: OI Report of Investigation - Case No. 5-83-002

FROM: Ross A. Scarano, Director
Division of Radiation Safety
and Safeguards

SUBJECT: DISPOSITION OF OI REPORT OF INVESTIGATION,
CASE NO. 5-83-002

The subject Report of Investigation (ROI), originating from an allegation concerning the adequacy of background investigations of contract security personnel, was reviewed by an Allegation Review Panel on June 20, 1985.

The panel determined that no violations of regulatory requirements were identified by the subject ROI, however, this report, in four areas, reflected upon the quality of the completed background investigations for security personnel at Diablo Canyon.

The panel notes that during Fiscal Year 85, the background investigation file for security personnel at Diablo Canyon were inspected by Region V with no reported discrepancies. Additionally, in April 1985, the licensee published the results of their annual audit in which no violations were identified within the area of background investigations for Diablo Canyon security personnel. However, during the next routine security inspection at Diablo Canyon (Fall, 1985) the four areas reflecting on the quality of background investigations identified in this ROI will be emphasized during the inspection of security background records.

The panel determined that this allegation may be closed and requires no further action.

Ross A Scarano

Ross A. Scarano, Director
Division of Radiation Safety
and Safeguards

cc: OI Investigation Report Transmittal File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

JUL 22 1985

MEMORANDUM FOR: File (Allegation No. RV-85-A-0042) (Alleg. 1719)

FROM: Allegation Review Board

SUBJECT: ALLEGATION REVIEW BOARD ACTION

An Allegation Review Board composed of R. Scarano, A. Johnson, O. Shackleton, J. Montgomery and M. Schuster met on July 12, 1985 to review the allegation presented by allegation number RV-85-A-0042. The anonymous alleger was concerned that plutonium had been stored at the Diablo Canyon Power Plant site for 19 years.

After reviewing the allegation, the Board directed G. Yuhas to contact the licensee. Discussions with the licensee and Board members revealed that the use and storage of sealed, licensed plutonium sources was common at many nuclear plants, other industrial facilities and major medical facilities. The sources at the Diablo Canyon plant are used for instrument calibration and operational verification.

The Board concluded that no violations of NRC requirements were likely and therefore the matter is considered closed.

Ross A Scarano
Ross A. Scarano, Director
Division of Radiation Safety
and Safeguards

Owen C. Shackleton Jr.
Owen C. Shackleton, Jr., Director
Office of Investigations, Region V

Allen D. Johnson
Allen D. Johnson
Enforcement Officer

James L. Montgomery
James L. Montgomery, Chief
Nuclear Materials Safety
and Safeguards Branch

M D Schuster
M. D. Schuster, Chief,
Safeguards Section

cc: T. Young (Allegation File, 3rd Floor)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

August 2, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on July 26, 1985, to examine and disposition the below listed items as follows:

OI Case No. Q5-84-015 (ATS Nos. RV-84-A-057, RV-84-A-064 and RV-84-A-115; Allegation Nos. 271, 272, 273, 631, 632, 1028, 1600, 1627 and 1628) QC Inspector discriminatory firing.

Inquiry and associated allegations, including No. 278, are CLOSED. DOL found that discrimination was not a factor but rather the alleger was terminated as part of a planned reduction in force. The alleged deficient condition pertaining to No. 278 was previously found to have been appropriately dispositioned.

OI Case No. Q5-84-033 (ATS Nos. RV-84-A-114 and RV-84-A-115, Allegation Nos. 1529 and 1583) Termination of employment for indicating discrepancies in full penetration welds on safety injection lines to RCS.

Inquiry and associated allegations are CLOSED. DOL found that the alleger was terminated based on the revocation of his security clearance by PG&E for reasons other than activity protected under NRC regulations.

OI Case No. Q5-84-012 (ATS Nos. RV-83-A-074, RV-84-A-052 and RV-84-A-062, Allegation Nos. 120, 233, 247, 248, 469, 570 and 588) QA Inspector restricted by QA/QC Manager in writing Noncomforance Reports leading to alleged termination.

Inquiry and associated allegations CLOSED. DOL determined that discrimination was not a factor but rather the alleger's termination was due to a planned reduction in force.

D.F. Kirsch
for A. E. Chaffee

A. D. Johnson
A. D. Johnson, Enforcement Officer

R T Dodds
R. T. Dodds

Owen C. Shackleton Jr. for
R. Meeks, OI Advisor to the Board

J F Burdoin
J. F. Burdoin

cc: DCAF ATS Nos. RV-84-A-052, 057, 062, 064, 074, 114, 115
DCS
D. Kirsch

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

July 30, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on July 26, 1985, to examine and disposition the below listed items as follows:

OI Case No. Q5-83-019 (Allegation No. 0070): Possible False Statement by PG&E in Response to NRC Notice of Violation

Inquiry CLOSED without further action as OI found that the licensee and/or the contractor did not supply false information to the NRC.

OI Case No. Q5-83-011 (Allegation No. 0018): Falsification of Resumes

Investigation disclosed that RV staff had previously inspected the same allegation and concluded that the QC inspectors were qualified in accordance with commitments made by PG&E. Inquiry CLOSED.

OI Case No. Q5-83-017 (Allegation No. 0281--ATS No. RV-84-A-057): Intimidation of QC Inspectors

Alleger refused to provide specific information until such time as the union resolved his termination by PPP for excessive tardiness and never re-contacted OI:RV as requested. This inquiry is CLOSED due to lack of specific information.

OI Case No. Q5-83-018: (Allegation No. 0053--ATS No. RV-83-A-039): Falsification of Welding Examinations

OI interviewed 9 welders and examined welder qualification and certification records and determined that there was no apparent wrongdoing in matters over which the NRC exercises regulatory authority. This inquiry is CLOSED.

OI Case No. Q5-83-022: Defective Weld Reports

OI determined that this appeared to be a technical issue regarding the dispositioning of defective "weld reports" by H. P. Foley Co. Inspections by RV inspectors have not indicated this to be a problem (Allegation Nos. 0024 and 0066). Inquiry CLOSED.

OI Case No. Q5-84-003 (ATS No. OIRV-84-A-0006): Falsification of Radiograph Reports

The inquiry failed to develop any information to substantiate alleger's concerns. Inquiry CLOSED.

OI Case No. Q5-84-017: Alleged Sabotage and Other Wrongdoings

Alleger did not provide any firsthand information concerning problems. Interviews of pertinent witnesses failed to develop any information to substantiate the alleger's concerns. Inquiry CLOSED.

OI Case No. Q5-84-018: (Allegation No. 1477 ATS No. RV-84-A-043) Alleged Threats and Intimidation of QC Inspectors

The inquiry disclosed that the incident was reported to the PG&E hotline and subsequently; investigated by PG&E. The investigation determined that the actions of the Bechtel supervisor were not in accordance with acceptable construction practices. PG&E formally requested that the supervisor be removed from the job site and the request was honored by Bechtel. Also, the technical problems addressed by the allegers in their hotline complaint were resolved, as was the issue of a "Thermolag Request".

A review of the actions of PG&E resulted in the determination that no further action concerning the matter by OI:RV was appropriate. Inquiry CLOSED.

OI Case No. Q5-84-021: Alleged Welding and Quality Assurance Problems

OI supplied information to RV from two Cal Poly professors who had concerns regarding the quality of welding and other quality assurance problems related to them by their students who had worked at Diablo Canyon. This information was provided RV for follow-up by the technical staff. This Allegation No. 0993, currently under review by LLNL. Inquiry considered CLOSED. Allegation No. 0993 still OPEN.

A.E. Chaffee by
A. E. Chaffee

J.L. Burdoin
J. Burdoin

A.D. Johnson
A. D. Johnson, Enforcement Officer

Owen C. Shackleton Jr. for
R. Meeks, OI Advisor to the Board

R. T. Dodds

cc: Allegation File
Chief, Engineering Section
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

July 30, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on July 26, 1985, to examine and disposition the below listed items as follows:

1) Allegation No. 0794 (RV-84-A-064) "Trust" Was Used To Verify Work Was Done To Specifications, Not Always Observation.

Based on inspections to date, there is no evidence to substantiate this allegation. This allegation lacks specificity. Allegation CLOSED.

2) Allegation No. 1108 (RV-84-A-064) PTGC - During System Testings There Were Some Nice Playing With Figures To Be Able To Make The Things Look Like It Is Working.

Lack of specificity. Examination of prior testing data has not indicated any substance for allegation. Allegation CLOSED.

3) Allegation No. 1610 (RV-84-A-115) Persons Leaving Plant During Bomb Threat Were Told Their Jobs Were In Jeopardy.

Management decision, this allegation does not raise safety concern nor does it indicate intimidation or harassment. Allegation CLOSED.

4) Allegation No. 1623 (RV-84-A-115) In June, 1983, A Security Guard Pointed His Automatic Weapon At Six Machinists At The Load Center Near Intake Structure And Took One At Gunpoint After Some Incident. Not Sure NRC Was Told About This.

No interest. Allegation CLOSED.

5) Allegation 1658 (RV-85-A-010) Employee Of Security Service Contractor Alleged Misconduct Of DCPP Nuclear Plant Operator.

Misconduct alleged does not relate to a nuclear safety concern and involves off-shift behavior and not a matter of NRC jurisdiction. Allegation CLOSED.

6) Allegation No. 0793 (RV-84-A-064) Drawings, Weld Procedures, Specifications Were Outdated Or Not Complete.

Review of transcript indicates that this is not a specific allegation. Also, our contractor inspected approximately 250 pipe supports to verify the modification resulting from the licensee's seismic reanalyzes program and did not identify any significant deficiencies with respect to outdated or incomplete procedures, specification or drawings. Allegation CLOSED.

7) Allegation No. 1022 (ATS-RV-84-A064) QC Department Not Properly Dispositioning Red (Hold) Tags.

Same as Allegation No. 279. Dispositioned in report No. 50-275/84-11. Procedure amended to clarify management controls regarding hold tag placement. Allegation CLOSED.

8) Allegation No. 0220 (RV-84-A-045) Electrical Support Welding Documentation Doesn't Exist For Problems.

The alleger also provided this concern to the licensee's "quality hotline". Following the licensee's investigation into this concern, the findings were presented to the alleger who agreed that this concern can be closed. Allegation CLOSED.

9) Allegation No. 0221 (RV-84-A-045) Betashield Hold Tags Removed. The alleger also turned this concern into the licensee's "quality hotline". The licensee, following their investigation presented their findings to the alleger who was satisfied with the results of the investigation. Allegation CLOSED.

10) Allegation No. 1021 (RV-84-A-064) Falsification Of Hanger Documentation

NRR's evaluation of allegations 55, 79 and 82 for the adequacy of the small bore pipe support analysis and acceptance of licensee corrective action satisfies the concerns of this allegation. Allegation CLOSED.

11) Allegation No. 1313 (RV-84-A-071) The 1/24/84 and 2/15/84 Policy Was Used To Block Hardware Problems From Being Redlined Onto The As-Built Drawings

Close Allegation No. 1313 based on PG&E's response provided by DCL-84-343 dated October 30, 1984, and that our review of the as-built program has not disclosed any significant problems.

A. Chaffee

J. Burdoin

R. T. Dodds

A. Johnson, Enforcement Officer

cc: Allegation File
Chief, Engineering Section

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

AUG 1 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on August 1, 1985, to examine and disposition the below listed items as follows:

OI Case No. Q5-83-013 (ATS No. RV-84-A-057; Allegation No. 329) PG&E hired immigrants because they would not raise safety concerns.

Inquiry and allegation are CLOSED. Factual basis of allegation is unfounded. PG&E only hired U.S. citizens or resident aliens (green card holders) as pipe support engineers, therefore, under U.S. law, deportation is not a consequence of unemployment.

OI Case No. Q5-85-010 (ATS No. RV-84-A-057; Allegation No. 282) Answers to QC exam laying on exam table.

Inquiry and allegation are CLOSED. Inquiry did not develop any evidence to indicate intentional violation of NRC's regulatory requirements. On the contrary, action was taken immediately to have tests taken individually when it was discovered that the question of one test could serve as a source for the other test. Additionally, inspections have shown QC inspectors to be appropriately qualified in this area.

OI Case No. Q5-85-021 (ATS No. RV-84-A-064; Allegation No. 975) QC Inspector's initial forged on grind sheet.

Inquiry and associated allegation are CLOSED. This appeared to be an isolated case for a structural weld (grind records not a code requirement). Inspection of weld by alleger showed grind was done correctly. No other instances have been identified. This is consistent with Regions' inspection experience.

OI Case No. Q5-85-024 (ATS No. RV-84-A-064; Allegation No. 1097) QC Inspector given answers to certification exam beforehand.

Inquiry and associated allegation are CLOSED. The retake of the QC Inspector Qualification Tests did not violate NRC regulations. The alleger was properly certified.

OI Case No. Q5-85-015 (ATS RV-84-A-062, Allegation No. 438) QC Manager forging inspector's name on inspection reports

Inquiry and associated allegations are CLOSED. The inquiry did not develop any evidence indicating forgery of inspector's record. Allegation related to signing rather than printing inspector's initials on process sheet for work signed by inspector elsewhere.

A. E. Chaffee

R. T. Dodds

J. F. Burdoin

A. D. Johnson, Enforcement Officer

R. A. Meeks, OI
Advisor to the Board

211

AUG 9 1985

MEMORANDUM FOR: DCAF File

FROM: Allegation Review Board

SUBJECT: ALLEGATION REVIEW BOARD MEETING

Date of Meeting: August 6, 1985

Facilities: Diablo Canyon Units 1 and 2

An Allegation Review Board comprised of the below identified individuals was convened on August 6, 1985, to disposition several allegations.

OI memorandums of July 25, 1985, indicated that the below identified inquiries and associated allegation numbers were being administratively closed and resolved by OI.

OI CASE NO.	ALLEGATION NOS.	ATS NO.
Q5-85-025	1191, 1192, 1193, 1194	RV-84-A-069
Q5-85-036	1588	RV-84-A-115

ALLEGATION NOS. 1191, 1192, 1193 & 1194

The Board has reviewed again, the response to these allegations provided by PG&E letter DCL-84-239. The licensee again responded to these issues in PG&E letter DCL-85-212, which the Board reviewed. The Board considers that there is no technical reason to warrant reopening these allegations on a technical basis. The Board further considers that the responses provided by the licensee to these issues are acceptable from a technical nature.

The Office of Investigation has determined that the issues of harassment and bribery do not warrant expenditure of Office of Investigation resources due to the extreme age of issues involved (1971 and 1972 time frame) and other OI investigations of harassment and intimidation are scheduled for investigation in the future.

The Board also notes that on-going inspections of the Diablo Canyon facility of civil structural work, during the period in question, did not identify any findings of sufficient import to result in any responsible questions regarding concrete and reinforcing steel installation adequacy in safety-related structures. Further, the Board does not consider that there is any reason to ask Office of Investigation to pursue these matters further. These allegations are closed.

ALLEGATION NO. 1588

Based on the alleger's inability to provide any specifics during the interviews with Office of Investigation, and the general nature of the allegation the Board concluded no further action is necessary. This action is closed.

ALLEGATION NO. 1712 & 1713

The Board considers this allegation is closed, based upon the staff's previous resolution of this issue documented in Inspection Report No. 50-275/84-42.

ALLEGATION NO. 1714

This is a duplicate of 1190 which was previously closed, based upon the Board's review of PG&E letter DCL-84-239 and DCL-85-212. The issues are the same. The Board considers that this allegation is closed.

The board determined that the above allegations are closed.

D.F. Kirsch
D. F. Kirsch

R. A. Meeks
OI Advisor to the Board

D. B. Pereira

L. W. Shollenberger
Legal Advisor to the Board

A. E. Chaffee

cc: DCS
ATS No. RV-84-A-069
ATS No. RV-84-A-115
DCAF ABM File
D. F. Kirsch
ATS No. RV-85-A-999

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

AUG 28 1985

MEMORANDUM FOR: Diablo Canyon Allegation
File - ATS No. RV-85-A-043

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW

On Tuesday, August 6, 1985, an allegation review board comprised of Messrs. D. F. Kirsch, A. E. Chaffee, L. W. Shollenberger, Jr., R. A. Meeks, and D. B. Pereira met to review documents received from Government Accountability Project (GAP) by Office of Investigations (OI) Field Office, Region V on July 15, 1985. These documents were sent to the Regional Administrator, Region V on July 18, 1985 for review and appropriate action. The attached documents are identified as follows:

1. Pullman Message/Reply dated March 13, 1984.

2. Seven page affidavit dated June 4, 1984.

3. Thirteen page affidavit dated June 17, 1985, with attachments 1-18, 20-21 and 26.
4. Fifty-three page affidavit dated June 8, 1985, with attachments 1-11, 14-16 and 19-24. (Attachment 4 identification placed by OI).

5. Twelve page affidavit dated June 3, 1985, with 6 pages of enclosures.

a. The petition amendment was received by Region V on July 18, 1985. The Board reviewed the documents identified above in accordance with the criteria presented in SSER-22. The Board determined that the documents contained 4 allegations which will be entered into the Diablo Canyon Allegation File System (DCAF) under the DCAF numbers 1722-1725.

b. The board assigned resolution responsibility as follows:
To PG&E for response (RV-P) - 1722, 1723, 1724, 1725 - Total (4)

c. In addition to the above 4 allegations, the Board determined that several concerns represented statements, assertions, complaints, and/or expressions of opinion which did not constitute allegations or they were rebuttals which represented no significant new facts. Accordingly, these were not accepted by the Board for entry into DCAF.

d. The Board found that this submittal and associated affidavits were mainly concerned with circumstances arising during construction which may have unnecessarily increased the cost of the facility. The Board considered these situations and concluded that, with the exception of the above identified allegations, these situations were acknowledged by the individuals to have been corrected in the normal course of construction and, therefore, did not constitute violations of regulatory requirements.

e. The issues and concerns identified in the seven page affidavit dated June 4, 1985, were fully addressed and documented in previous inspection reports 50-275/76-01 and 50-275/76-04 and presented no new issues. The issues and concerns identified in the twelve page affidavit dated June 3, 1985 were addressed previously during consideration of ATS No. RV-85-A-004 and presented no new issues.

D. F. Kirsch — 8/28/85 Date

A. ~~E.~~ Chaffee — 9/3/85 Date

L. W. Shollenberger, Jr.
Legal Advisior to the Board — 8/30/85 Date

Owen O. Shackleton Jr. for
R. A. Meeks
OL Advisor to the Board — 8/29/85 Date

D. B. Pereira — 8/28/85 Date

cc:
ATS No. RV-85-A-043
Kirsch

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

September 25, 1985

MEMORANDUM FOR: File - ATS Nos. RV-84-A-062/064/115

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on September 25, 1985, to examine and disposition the below listed items as follows:

OI Case No. 5-85-020 (Allegation Nos. 0943 and 1096) QC Inspection Exam Back Dated to Cover Non-Certified Inspections

Inquiry and related allegations CLOSED without further action as OI could not substantiate the allegation. The information obtained does not support a conclusion of falsification of records and is based on individuals' memories occurring about six years ago. The Board further considers that the technical issue related to inspector certification has been adequately addressed and resolved by the licensee in response to Inspection Report No. 50-275/83-37. No further action is required.

OI Case No. 5-85-014 (Allegation Nos. 425, 731 and 1613) Inspection Intimidation

Inquiry and related allegations CLOSED without further action based on OI's interview with alleger in which he stated that he had never received any acts of discrimination or opposition because he was raising valid safety concerns. He did not provide any specifics to show that others had been discriminated against or that an extended work week affected QC inspection performance.

D. F. Kirsch
D. F. Kirsch

A. E. Chaffee

R. T. Dodds

A. D. Johnson, Enforcement Officer

P. H. Joukoff, OI Advisor to the Board

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

October 29, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATIONS

An Allegation Review Board, comprised of the below listed individuals, was convened on October 28, 1985, to examine and disposition the below listed items as follows:

Allegation No 1625, ATS No. RV-84-A-115 - Worker told by a Foreman to ignore radiation alarms while working in containment in November 1983 (Closed per IR 83-38)

An inspection covering the issue (IR No. 50-275/83-38) was performed on November 14-18, 1983. This inspection independently identified similar problems to those alleged by the concerned individual. The inspection findings resulted in a Notice of Violation being issued to the licensee. The licensee responded to the Notice of Violation on January 9, 1984. In their response the Violation was admitted and corrective action was described. In March 1985, and inspector verified that the corrective actions described in the licensee's response had been accomplished. The Division of Radiation Safety and Safeguards does not have any further questions on this matter and recommends that the matter be closed. Therefore, the Board considers this allegation CLOSED.

Allegation No. 786, ATS No. RV-84-A-064 - NRC was not available at night; there were no avenues to report harassment. (CLOSED)

NRC Form 3's have been posted around the site in conspicuous areas giving workers NRC telephone numbers where collect calls can be made. Further, the resident inspector's plant number has been placed in conspicuous places around the plant. Had alleger seriously needed to contact the NRC, he could have made such a call and the resident inspector or another NRC inspector would have made arrangements to meet with the alleger at night. (CLOSED)

Allegation No. 1449 ATS No. RV-84-A-090 - NRC staff has not independently investigated all of the problems. (CLOSED)

As discussed in SSER 21, 22 and 26, following appropriate screening by the NRC staff, a number of allegations have been and will be submitted to the licensee for evaluation. The licensee has been required to provide results of their evaluations and identify any necessary corrective action to the staff in writing. The subsequent staff evaluation of an allegation then also considers the licensee's response and action. The item can only be closed after consideration and approval by an Allegation Review Board in accordance with the DECAMP procedure. (CLOSED)

Allegation No. 1497, ATS No. RV-84-A-114 - PTGC instructed pipe engineers to throw out relevant documentation, including originals. (CLOSED)¶

The inspector examining the stanchion welding allegations, documented in Inspection Report 50-275/84-42, observed that the documentation of the situation present in the Pullman work packages was sufficient and complied with regulatory requirements. Further, the inspector observed that the appropriate documentation supplied by the alleger was included in the Pullman documentation packages. (CLOSED)

D.F. Kirsch

D. F. Kirsch

A. E. Chaffee

A Johnson

A. D. Johnson, Enforcement Officer

R. T. Dodds

O. C. Shackleton

O. C. Shackelton, OI Advisor to the Board

R. A. Meeks, OI Advisor to the Board

cc: ATS File Nos. RV-84-A-064; 090; 114; 115
DCS
D. Kirsch
ABM File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

November 14, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD

An Allegation Review Board, comprised of the below listed individuals, was convened on November 14, 1985, to examine and disposition the below listed items as follows:

ATS RV-85-A-043, Allegation Nos. 1722, 1723, 1724 and 1725

The Allegation Review Board evaluated the PG&E responses provided by letter number DCL-85-332, dated October 22, 1985, to these allegations that were referred to PG&E by Region V letter, dated September 5, 1985. Based upon the Board's evaluation of the responses provided by PG&E, the Board has determined that these allegations require no further staff action and accordingly are CLOSED. The Board was also informed that the resident inspector made a tour of the intake structure on November 6, 1985, to verify the veracity of PG&E's response to allegation No. 1725 and could find no evidence of carbon arcing on conduits or electrical panels (NRC Inspection Report No. 50-275/85-34).

OI Case No. 5-85-020 (Allegation Nos. 0943 and 1096, ATS No. RV-84-A-064) QC Inspection exam backdated to cover non-certified inspections. (CLOSED)

This case and associated allegations were closed in a Board meeting on September 25, 1985. However, OI has requested the Board to restate OI's findings as follows: Instead of "The information obtained does not support a conclusion of falsification of records and is based on individuals' memories occurring about six year ago" insert, "The information obtained was not conclusive that a specific individual falsified certification records. However, the weight of the evidence tends to support the fact that the certification records in question appear altered. The investigation could not clearly recreate the fact pattern on this issue because the individuals involved did not have sufficient recall on incidents that occurred over five years ago."

The investigation and related allegations are still considered CLOSED without further action as OI could not substantiate the allegation and the technical issue related to inspector certification has been adequately addressed and resolved by the licensee in response to Inspection Report No. 50-275/83-37. (CLOSED)

ATS RV-85-A-999, Allegation Nos. 1686 and 1690

These allegations had been assigned to NRR but were returned by NRR to the Region on October 3, 1981, indicating a need for Region V input. The Allegation Review Board evaluated the PG&E responses provided by letter number DCL-85-212, dated June 13, 1985, to these allegations. Based on the Board's evaluation of the responses provided by PG&E, and with knowledge of the stated program for drawing control that was verified during NRC inspections conducted at the time (NRC Inspection Report Nos. 50-275/82-07, 82-26 and 84-28), the Board has determined that these allegations require no further staff action and accordingly are CLOSED.

D.F. Kirsch
D. F. Kirsch

Owen C Shackleton Jr
Owen Shackleton, OI Consultant to the Board

R. T. Dodds

J. F. Burdoin

L. W. Shollenberger
Legal Advisor to the Board

R. A. Meeks, OI Consultant to the Board

cc: T. Young
R. Muscat
D. Kirsch
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

December 6, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD

An Allegation Review Board, comprised of the below listed individuals, was convened on December 6, 1985, to examine and disposition a number of allegations identified below.

A review of the allegations listed on the memo to John Martin, Regional Administrator, from Ron Meeks, OI, dated 08/15/85, including Allegation 1706, was conducted to ascertain the "technical" significance, if any, that warrants further investigation beyond the apparent "civil" issues of harassment, intimidation, etc. All seventy-seven of these were sorted into the four groups designated below. Allegations related to categories I and II were examined at this particular board meeting. Categories III and IV will be examined later.

I. Document Control - 14.
II. Procedural - 12
III. Intimidation - 44
IV. Other - 7

I. DOCUMENT CONTROL
Reconstruction, recreating, compiling or revising documents related to plant construction.

A. ATS RV-84-A-062, Allegation Nos. 0419 and 0436, and ATS RV-84-A-064, Allegation No. 0782, 0996, and 1025
Allegation Nos. 0419, 0436, 0782, 1025 are all related to the same incident - ie. The alleger observed an inspector entering initials other than his own, on documents related to inspections of shear lugs that were conducted by someone else. This was a G. F. Atkinson, Inspector, and it was to have occurred in 1978.

A review of source documents has revealed that these allegations are the same as Allegations 0783 and 0784 which were addressed by the licensee in its letters DCL-84-243 dated June 29, 1984 and DCL-84-328 dated October 18, 1984. The licensee's responses to these allegations have been examined. It is concluded that the preparation and review of quality assurance records were conducted in accordance with established procedures, and there was no falsification in the "clean up" of documentation, as alleged. ALLEGATIONS CLOSED.

B. ATS RV-84-A-062, Allegation No. 0437

The source document revealed that the alleged condition was discovered and corrected by the alleger and by itself does not establish a widespread practice. No further action is required. ALLEGATION CLOSED.

C. ATS RV-84-A-062, Allegation 0395; ATS RV-84-A-064, Allegation 0774

The source documents lacked the specificity needed to conduct further review of the allegations. In this case, the alleger was conducting a documented audit of vault records, and there is no evidence that the audit was not completed through corrective actions by the licensee. Inspections by the Region have consistently shown the licensee/contractors here properly addressed audit findings. The allegation does not warrant further inspection effort. ALLEGATIONS CLOSED.

D. ATS RV-84-A-064, Allegations 0779, 0780 and 0997.

These allegations relate to the quality of work performed by a specific Q.C. inspector. The licensee reinspected all inspection work accomplished by the inspector in question except where access was limited. The technical significance of these allegations has been adequately addressed by the inspection conducted for #0995 and reported in NRC Inspection Report No. 50-275/85-27, dated 07/19/85. No further action is required. ALLEGATIONS CLOSED.

E. ATS RV-84-A-071, Allegation 1226; ATS RV-84-A-091, Allegation 1468

The identities of the welders on the piping process sheets were alleged to have been changed to be consistent with rod requisition records. The source document lacks the specificity necessary to conduct further review of these allegations. However, inconsistencies between the process sheet and the rod requisition sheet are to be expected since, for multi-pass welds, only the first five and last pass welders are required to be identified on the process sheet. Additional safety assurance is derived from the favorable results of the Internal Technical Review and Independent Design Verification Programs conducted by the staff and its contractors. Inspections of the documentation and hardware associated with over 740 piping supports and rupture restraints for safety related systems in both units were conducted without any significant documentation irregularities (references 50-275/84-54 and 85-29, and 50-323/84-22 and 85-26). Further inspections would not be very meaningful. These allegations are considered CLOSED.

F. ATS RV-84-A-115, Allegation 1620

The source document lacks the specificity to conduct an adequate review of the alleged incident. The safety significance is related to the functional integrity of the diesel generator sets or, more specifically, their lube oil pumps. Subsequent testing of the D-G sets during the Pre-Operational Testing Program has been completed and demonstrates their reliability as documented in staff reports Nos. 50-275/85-25 and 50-323/85-22. Furthermore, the licensee has continued to test the D-G's in compliance with the technical specifications. This allegation is CLOSED.

II PROCEDURAL ACTION OR INACTION ON THE PART OF THE LICENSEE CONTRARY TO ESTABLISHED PRACTICE

A. ATS RV-84-A-064, ALLEGATIONS 0757, 0910 AND 0913
ATS RV-84-A-115, ALLEGATION 1617
These potential allegations imply that various forms of intimidation would be applied by management if instructions contrary to established procedures were not followed. The source documents lacked sufficient specificity to identify any wrong doing or significant technical issues. ALLEGATIONS CLOSED.

B. ATS RV-84-A-064, ALLEGATIONS 804, 1060
These allegations regarding limitations imposed upon inspectors in their use of Hold Tags are similar to allegation #279 which was addressed in NRC Report 50-275/84-11 and 50-323/84-11, dated July 8, 1984. No further action is warranted. ALLEGATIONS CLOSED.

C. ATS RV-84-A-114, ALLEGATION 1539
The technical issue related to this allegation was the qualification of the H. P. Foley welders to weld 3/16" diameter instrumentation tubing. Resolution of this issue can be found in the response to allegation #139 (reference Safety Evaluation Report NUREG 0675, Supplement 22, A.4-139.1), and allegation #1538 (see NRC Inspection Report No. 50-275/84-42). Irrespective, the Board does not perceive the alleged requirement for QC inspectors to sign an affidavit to be an intimidation issue. ALLEGATION CLOSED.

D. ATS RV 84-A-057, ALLEGATION 0283; RV-84-A-062, ALLEGATION 0407; RV-84-A-071, ALLEGATION 1303; RV-84-A-091, ALLEGATION 1455; and RV-84-A-115, ALLEGATION 1589.

These are all related to actions or inactions by the licensee involving procedures, documentation or hardware, perceived by the alleger to be contrary to established standards but with insufficient specificity to support an investigation and must therefore be CLOSED.

D. F. Kirsch, Deputy Director

R. T. Dodds, Chief, Projects Section II

J. F. Burdoin
J. F. Burdoin, Project Inspector

W. O. Wade, E.G.&G., Contract Consultant

R. A. Meeks, Sr. Investigator, OI, RV

O. C. Shackleton
O. C. Shackleton, Director, OI, RV

12/11/85
L. W. Shollenberger, Legal Advisor
to the Board

cc: T. Young
R. Muscat
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

December 16, 1985

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD

An Allegation Review Board, comprised of the below listed individuals, was convened on December 16, 1985, to examine and disposition a number of allegations identified below.

A review of the allegations listed on the memo to John Martin, Regional Administrator, from Ron Meeks, OI, dated 08/15/85, including Allegation 1706, was conducted to ascertain the "technical" significance, if any, that warrants further investigation beyond the apparent "civil" issues of harassment, intimidation, etc. All seventy-seven of these were sorted into the four groups designated below. Allegations related to categories I and II were dispositioned in a board meeting held on December 6, 1985. This Board continued with the dispositioning of categories III and IV allegations.

I. Document Control - 14.
II. Procedural - 12
III. Intimidation - 44
IV. Other - 7

III. INTIMIDATION

A. ALLEGATIONS 0250, 0256, 0328, 1597 (0404, 0845, 1599) (0411,0442, 1598) (0412,1000) (0413, 0439, 0769, 1001) 0766, 0809, 0914,1002, 1014, 1024,(1259, 1269, 1609) 1268, 1271, 1323, 1325, 1420,1440, 1442, 1445 (1450, 1470, 1629) (1621, 1622, 1624, 1626) (Note: Numbers in parenthesis are closely related allegations.)

These allegations can be generally characterized as actions or in-actions by management to intimidate personnel through layoffs, terminations, transfers, demotions and other forms of harassment, including acts or threats of physical harm by other workers, perceived by the allegers to be directed at "corner cutting" and the suppression of quality and safety related concerns. Actions already taken by the staff (reference Safety Evaluation Report, NUREG 0675, Supplement 22) involving several thousand staff man-hours and direct contacts with hundreds of site personnel, specifically addressing these issues, have not revealed any company attitude to foster the kinds of activity alleged.

Further application of NRC resources on these matters is not warranted due to the insignificant technical aspects of some of the allegations and/or the fact that no unresolved technical issues could be identified from the source documents. ALLEGATIONS CLOSED.

B. ATS RV-84-A-052, ALLEGATION 0592; RV-84-A-064, ALLEGATIONS 0770, and 905; RV 84-A-115, ALLEGATION 1578.

The referenced source documents for these allegations did not adequately support the characterization statements that implied intimidation, nor were there any other significant safety issues not previously identified. It was, therefore, not possible to assess any definitive technical significance to the allegations. ALLEGATIONS CLOSED.

IV OTHERS

A. ATS RV-84-A-064, ALLEGATION 0767.

The characterization statement for this allegation when read in context with the source document appears not to have been directed at wrongdoing, but rather to establish some value to the job that he was performing for the company. As a consequence, the allegation has no substance and is CLOSED.

B. ATS RV-84-A-064, ALLEGATION 0852.
The implication of the characterization statement in the source document is that the company hired unqualified welding inspectors. The allegation has already been addressed in response to Allegation #993 in NRC Inspection Reports 50-275/85-35 and 50-323/85-33, dated November 26, 1985. ALLEGATION CLOSED

C. ATS RV-84-A-071, ALLEGATION 1210; ATS RV-84-A-091, ALLEGATION 1463

The source documents reveal the technical issue addressed by the PG&E letter referenced in the characterization statement is related to the carbon level in stainless steel piping and inter-granular stress corrosion cracking phenomena. Other allegations related to this issue have been resolved by the staff. Reference Allegation #1195-1197 in NUREG 0675, Supplement 26, dated July, 1984. ALLEGATIONS CLOSED.

D. ATS RV-85-A-999, ALLEGATION 1706.

This allegation clearly exhibits technical significance in that both the material specification and application are provided. However, the allegation has already been addressed and closed by the staff (reference NRC Inspection Reports 50-275/84-42 and 50-323/84-31, dated February 5, 1985) in response to Allegation #1541 with regard to the A-307 material. Allegation #1541 has been CLOSED. A response to the allegation concerning the other two materials was prepared by PG&E in DCL 85-212, pp. 108 and 109, dated June 13, 1985. A review of the actions taken by the licensee and the associated documentation (DR 5739, 5891 & 8521 and NCR DC1-84-RM-N010 & 011) reveals proper dispositioning and is acceptable by the staff. ALLEGATION CLOSED.

E. ATS RV-84-A-114, ALLEGATION 1500; ATS RV-84-A-115, ALLEGATION 1556

These allegations clearly exhibit technical significance in that specific plant components (Paramount stanchions for Rupture Restraints) associated with the characterization statements are identified. However, this issue was thoroughly evaluated by the staff and documented in NRC Inspection Report 50-275/84-42 dated February 5, 1985 in response to allegation numbers 1473, 1495, 1496, 1498, 1499, 1526, 1553, 1554 and 1555. (ATS Nos. RV-84-A-078 and 115). ALLEGATIONS CLOSED.

D. F. Kirsch

D. F. Kirsch, Deputy Director

R. T. Dodds

R. T. Dodds, Chief, Reactor Section II

J. F. Burdoin

J. F. Burdoin, Project Inspector

W. O. Wade, EG&G
Contract Consultant

R. A. Meeks, Sr. Investigator
OI, RV

O. C. Shackleton

O. C. Shackleton, Director
OI, RV

A. D. Johnson

A. D. Johnson, Allegation Coordinator
Advisor to the Board

cc: T. Young
R. Muscat
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

January 3, 1986

MEMORANDUM FOR: File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the below listed individuals, was convened on January 3, 1986, to examine and disposition the below listed item as follows:

OI Case No. Q5-85-007 (ATS Nos. RV-83-A-063, RV-84-A-064, and RV-84-A-069; Allegation Nos. 0091, 1015 and 1149 respectively) Worker transferred for raising safety concerns on spring can bracket.

Inquiry and associated allegations are CLOSED. The work pertaining to the allegations was not within the jurisdiction of the NRC (non-safety-related). Results of the investigation indicate that the worker was reassigned to other hanger work because he did not want work to continue on this matter until all NDE work on the welded beam attachments, including traceability, had been completed. The installation of the welded beam attachment (hanger 1029-5CS) was subsequently completed.

D. F. Kirsch, Deputy Director, DRS&P

A. D. Johnson, Allegation Coordinator

R. T. Dodds, Chief, Reactor Projects Section I

R. A. Meeks, OI Advisor to the Board

J. F. Burdoin, Reactor Inspector

cc: T. Young
R. Muscat
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

January 7, 1986

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW Board

An Allegation Review Board, comprised of the below listed individuals, was convened on January 7, 1986, to examine and disposition the below listed items as follows:

ATS RV-85-A-999, Allegation Nos. 1678, 1679, 1680, 1681, 1682, 1683, 1708 1709, 1710 and 1711

These allegations had been assigned to OI but were returned by OI to the Region on July 12, 1985, indicating a need for Region V input. the Allegation Review Board has reviewed relevant documentation and evaluated the PG&E responses to the allegations provided in DCL-85-212, dated June 15, 1985, and concludes that the potential technical issues have been adequately addressed and that the element of intentional violation or careless disregard of regulatory requirements, industry standards or contract requirements is not evident. Therefore, the Board has determined that these allegations require no further staff action and accordingly are CLOSED.

D. F. Kirsch

A. D. Johnson, Allegation
Coordinator

R. T. Dodds

R. A. Meeks, OI Consultant
to the Board

J. F. Burdoin

Owen Shackleton, OI Consultant
to the Board

cc: T. Young
R. Muscat
DCS

W. O. Wade, EG&G
Contract Consultant

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

January 7, 1986

MEMORANDUM FOR: File

FROM: Allegation Review Board Meeting

SUBJECT: DIABLO CANYON ALLEGATION REVIEW Board

An Allegation Review Board, comprised of the below listed individuals, was convened on January 7, 1986. The Board CLOSED the following allegations in accordance with agency policy since they had been assigned to OIA for investigation:

ATS	RV-84-A-067	Allegation 0879
ATS	RV-84-A-069	Allegation 1130
ATS	RV-84-A-071	Allegation 1277
ATS	RV-84-A-088	Allegation 1438
ATS	RV-84-A-089	Allegation 1439, 1441 and 1444

D. F. Kirsch
D. F. Kirsch

J. F. Burdoin
J. F. Burdoin

R. T. Dodds
R. T. Dodds

A. D. Johnson
A. D. Johnson, Allegation Coordinator

cc: T. Young
R. Muscat
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

FEB 14 1986

MEMORANDUM FOR: Diablo Canyon Allegation File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

Reference: ARB Meeting Minutes, August 2, 1985

An allegation Review Board, comprised of the individuals listed below, was convened on February 12, 1986, to examine and disposition the items listed below as follows:

I. OI Case No. Q5-84-011 (ATS Nos. RV84A009, RV84A052, RV84A064, RV84A067 and RV84A115; Allegation Nos. 130, 224, 249, 489, 490, 503 589, 590, 887, 929, 930 and 1611.) Pullman QC inspector terminated for writing an NCR.

Inquiry and associated allegations are CLOSED. The ABM on August 2, 1985, referred this case to Johnson/Shollenberger for evaluation, in conjuction with OELD, pending completion of the DOL action being taken on this case. The Wage and Hour Compliance Division of the Department of Labor initially found that discrimination was a factor in the alleger's termination. In response to an appeal by the alleger's employer, Pullman Power Products, an Administrative Law Judge recommended dismissal with prejudice to the Secretary of Labor which was eventually upheld. The safety significance of the related technical issues have been addressed and closed as evidenced by ABM 7/12, 10/24 and 2/17/84, and documented in SSER(s) 26 and 28.

II. The OI investigation/inquiry of the following cases have been completed and are CLOSED as indicated below.

A. OI Case No. 5-85-027 (ATS No. RV85A017 and RV84A091; Allegation Nos. 1217 and 1465.) QA reviewers fired for not accepting document packages.

Inquiry and associated allegations are CLOSED. The evidence collected and evaluated by this investigation indicated that the alleger was terminated due to excessive unexcused absences and not due to his questioning Pullman's review procedures for small bore piping hangers. The unrelated technical issue raised by this alleger regarding downgraded certification procedures by QA Document Reviewers was addressed in the response to Allegation No. 1542 documented by ABM 3/26/85 and SSER 28.

II. B. OI Case No. Q5-85-004 (ATS No. RV85A004; Allegation No. 1656)
Allegations by a former electrician of serious violations and cover-ups.

These allegations were previously closed in ABM conducted on May 1, 1985, based on the licensee's response, as these allegations had no nuclear safety significance. The OI inquiry did not identify any evidence of wrong doing. Therefore, this inquiry is CLOSED.

III. The unresolved allegations assigned to OI were examined. It was determined that the safety-significant technical issues related to these allegations have been appropriately resolved.

A. D. Johnson
A. D. Johnson, Allegation Coordinator

A E Chaffee
A. E. Chaffee

D. F. Kirsch
D. F. Kirsch

R A Meeks
R. A. Meeks, OI Consultant to the Board

R T Dodds
R. T. Dodds

R T Dodds for ✓
W. O. Wade, Contractor Consultant to the Board

cc: DCAF ATS Nos. RV85A004, 017, 067
RV84A009, 052, 065, 091
D. Kirsch
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

FEB 26 1986

MEMORANDUM FOR: Diablo Canyon Allegation File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

Reference: ARB Meeting Minutes, August 2, 1985

An Allegation Review Board, comprised of the individuals listed below, was convened on February 26, 1986, to examine and disposition the items listed below as follows:

The ABM on August 2, 1985, referred the following two OI cases to Johnson/Shollenberger for evaluation, in conjunction with OELD, pending completion of the DOL action being taken on these cases. The DOL action has been completed. The Region V Enforcement Officer reviewed and discussed these cases with the IE Enforcement Specialist on February 25, 1986.

RV84A156

OI Case No. Q5-83-025 (ATS Nos. RV84A052, RV84A064 and RV84A115; Allegation Nos. 81, 82, 254, 1016, 1017, 1051, 1614, and 1619.
Discrimination for documenting deficiencies on pipe supports and pipe stress design.

Inquiry and associated allegations are CLOSED. The Wage and Hour Compliance Division of the Department of Labor initially found that discrimination was a factor in the alleger's termination during a reduction in force by the employer. However, following an appeal by PG&E, an Administrative Law Judge (ALJ) dismissed the alleger's complaint without ruling on the discrimination issue because the matter was not originally filed within the allotted 30 days. The OI review of the case provided no evidence of an appeal against the ALJ decision by the alleger. The technical issues raised by the alleger in association with this allegation have been addressed and documented in ABM 7/24/84, ABM 7/26/84, and SSER(s) 26 and 28. After a review and discussion of the information available from DOL and from the discussion between the Region V Enforcement Officer and the IE Enforcement Specialist, the Board deems it unwarranted to pursue the matter further and, therefore, recommends the inquiry and associated allegations be CLOSED.

FEB 28 1986

OI Case No. Q5-84-037 (ATS No. RV84A122; Allegation No. 1649) QC Inspector terminated by PROMATEC for raising safety concerns on radiation lead seals.

Inquiry and associated allegation is CLOSED. The Wage and Hour Compliance Division of the Department of Labor initially found that discrimination was a factor in the termination of the alleger and a settlement was affected between the alleger and his former employer. The safety significance related to the integrity of the penetration seals was addressed in Inspection Report 85-03 in response to Allegations 1649 and 1654. After a review and discussion of the information available from DOL and from the discussion between the Region V Enforcement Officer and the IE Enforcement Specialist, the Board deems it unwarranted to pursue the matter further and, therefore, recommends the inquiry and associated allegations be CLOSED.

A D Johnson
A. D. Johnson, Allegation Coordinator

A. E. Chaffee

D. F. Kirsch

R. A. Meeks, OI Consultant to the Board

R T Dodds
R. T. Dodds

RT Dodds for
W. O. Wade, Contractor Consultant to the Board

cc: DCAF ATS Nos. RV84A037, 052, 064, 115
D. Kirsch
DCS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

MAR 14 1986

MEMORANDUM FOR: Diablo Canyon Allegation File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the individuals listed below, was convened on March 13, 1986, to examine and disposition the items listed below as follows:

I. OI Case No. Q5-83-017, allegation number 23 was closed by OI:RV with issuance of a Report of Inquiry dated June 29, 1984 as noted in SSER-22. Per memorandum from OI dated February 5, 1986, allegation numbers 591 and 1612 (ATS numbers RV-84-A-052 and RV-84-14-A-115) are duplicates of allegation number 23 and are, therefore, considered CLOSED.

II. OI Case No. 5-84-023, allegation number 223, ATS number RV-84-A-046 was closed by OI:RV with issuance of Report of Investigation dated December 7, 1984. An Allegation Review Panel on December 17, 1984 subsequently closed the allegation requiring no further action. Allegation number 1546 (ATS-84-A-115) is a duplication of allegation number 223 and is, therefore, considered CLOSED. Copy of synopsis of investigation will be forwarded to the alleger in response to a letter of inquiry dated February 28, 1986.

III. OI Case No. Q5-85-045, Diablo Canyon Unit No. 1 - Termination of an electrician by Bechtel Construction, Inc. for being a "whistleblower".

OI case CLOSED without further action since the discharge of the employee related to a question of following procedures for only accounting and scheduling purposes that do not involve NRC regulatory requirements.

IV. OI Case No. 5-85-042, Allegation No. 1717 (ATS No. RV-85-A-026): Former document QA reviewer for Pullman Power Products was discriminated against for raising safety concerns.

The OI investigation disclosed that the former QA Document Reviewer, a non-Pullman contract employee, while in the capacity of a draftsperson for Pullman's Engineering As-Built Group, did point out deficiencies in Pullman's documentation of hangar packages. To do such was part the assigned responsibilities. Subsequent personnel transfers of the draftsman was at the alleger's request. Termination of employment with Pullman was due to a decline in the as-built work load and the alleger's refusal to accept another position at a reduction in pay as a Pullman direct employee. The alleger had the following two technical concerns that were not addressed by investigation:

a. The alleger indicated that final approval of Pullman's piping system isometric packages was being left to Pullman Engineering, believing this to be a violation regulating requirements that call for final sign off of such packages by QA.

The Region's/contractor's inspections have shown this not to be the case. The final review of these packages is required to be accomplished by PG&E engineering. Further, the NRC does not require QA to be the final approval authority on this activity but rather, they are responsible for auditing conformance to program requirements.

b. The alleger indicated that Pullman and Bechtel wanted to minimize the highlighting of deficiencies by utilization of a computerized tracking system but was discouraged from this by Bechtel.

The Region's/contractor's inspection determined that Bechtel controlled the master completion list that was a complete listing of all outstanding deficiencies to assure their proper closure. The inspections of piping systems, including pipe supports, showed that these deficiencies were properly tracked and dispositioned by PG&E General Construction (Bechtel). No significant deficiencies were identified during the NRC inspections in this area.

Based on the above, the OI case and assodicated allegation with concerns are CLOSED.

V. OI Case Nos. Q5-85-012 (ATS Nos: RV-84-A-064 and RV-84-A-115; Allegation Nos: 912, 1615, 1616 and 1618), Q5-85-016 (ATS No: RV-84-A-115; Allegation Nos: 1570, 1579, 1580, 1581, 1603, 1604, 1605, 1606, 1607 and 1608), Q5-85-017 (ATS No: RV-84-A-064, Allegation Nos: 970, 972, 973, 978 and 979), and Q5-85-026 (ATS Nos: RV-84-A-019, RV-84-A-020, RV-84-A-071, RV-84-A-090 and RV-84-A-115, Allegation Nos: 156, 157, 1198, 1446, 1447, 1448, 1601, 1630, 1631, 1632, 1633, 1634, 1635, 1637, 1638, 1639, 1640 and 1641)

The subject OI cases and associated allegations were examined during a ABM on February 12, 1986 and it was determined that the technical and quality related concerns related to these allegations have been appropriately resolved and that the identified technical issues were unsubstantiated. Based on this information OI has declared these cases and associated allegations to be closed, pending the receipt of any new information. Accordingly, the Board considers these cases and associated allegations to be CLOSED.

VI. ATS No. 84-A-114, Allegation No. 1524 - PG&E management would not take corrective action on the problem of the inadequate support clamps on hydrogen gas system lines.

The Allegation Review Board has reviewed relevant documentation and evaluated the PG&E responses to the allegations provided in DCL-85-144, dated April 8, 1985, and concludes that the potential technical issues have been adequately addressed and that the licensee did take corrective action following the allegations by walking the system down and determining through evaluation that "unistrut" clamps were adequate for the two lines in which they were used. This allegation is CLOSED.

VII. ATS No. 85-A-999, Allegation No. 1702 - Calculation packages had quotas imposed on the number of packages processed daily by personnel at off-site consultants, that could have overridden quality concerns.

Allegation Review Board has reviewed relevant documentation and evaluated the PG&E responses to the allegations provided in DCL-85-212 dated June 13, 1985, and concludes that the potential technical issues have been addressed and that the licensee exercised sufficient control over the consultant by reviewing support design packages prepared by consultants to assure compliance with the procedures and design criteria. The calculation packages were reviewed and accepted only after reviewers were assured that project criteria had been met. The licensee never found any instances where production "overrode quality concerns" by offsite consultants. Accordingly, this allegation is CLOSED.

VIII.ATS No. RV-84-A-115, Allegation No. 1544 - Stainless steel pipe fittings, silver braised on Unit 1 boric acid tanks, leaked and were not repaired

This item was previously responded to by the licensee in DCL-85-077 and was accepted as being properly dispositioned in ABM of March 26, 1985, SSER 28. In DCL-86-062 dated March 10, 1986, the licensee indicated additional silver-brazed fittings were discovered on Unit 2 capillary systems. As a result, additional walkdowns were conducted and a fitting changeout program initiated and completed. Analysis of the one line considered to be Class 1B indicates that it would not have failed. Accordingly, this item remains CLOSED.

IX. ATS No. RV-84-A-064, Allegation No. 1109 - PTGC-OVID does not indicate the valve number that should be secured if you get a break in a sight glass or other equipment failure.

Inspection report 84-11, in paragraph 10, discusses the staff's examination of the utilization of OVIDs and P&IDs in response to a number of allegations that adequately addresses this concern. Allegation CLOSED.

X. OI Case No. Q5-84-022, allegation numbers 1445 and 1578, was transferred by OI:RV to Region V in memorandum dated August 15, 1985, for evaluation of technical significance. This case, and associated allegations, were subsequently closed without further action in an Allegation Board Meeting held December 16, 1985. Allegation 1224 (ATS No. RV-A-071) is directly related to these allegations and is therefore considered CLOSED.

D. F. Kirsch
D. F. Kirsch

R T Dodds
R. T. Dodds

A. D. Johnson
A. D. Johnson
Allegation Coordinator

R T Dodds for
H. Schierling

for
R. A. Meeks, OI Consultant
to the Board

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

APR 3 1986

MEMORANDUM FOR: Diablo Canyon Allegation File

FROM: Allegation Review Board

SUBJECT: DIABLO CANYON ALLEGATION REVIEW BOARD MEETING

An Allegation Review Board, comprised of the individuals listed below, was convened on April 3, 1986, to examine and disposition the items listed below as follows:

ATS No. RV-A-85-052, Allegation No. 508, was erroneously listed in an ABM on 2/12/86 as Allegation No. 503. Allegation No. 503 was closed in ABM of 7/12/84 as indicated in SSER 28. Allegation No. 508 is associated with OI Case No. Q5-84-011 which was closed in the 2/12/86 ABM. Therefore, Allegation 508 is CLOSED.

ATS No. RV-A-84-A-071, Allegation No. 1224 was closed in error in an ABM on 3/13/86. Therefore, Allegation No. 1224 remains OPEN and assigned to OI for closeout responsibility.

ATS No. RV-84-A-071, Allegation No. 1233 was erroneously listed as 1333 in SSER 26, Appendix D, Page A.4-1233/1238.1. Therefore, 1233 is now considered CLOSED pursuant to this board meeting.

A. E. Chaffee

A. D. Johnson
Allegation Coordinator

R. T. Dodds

R. A. Meeks, OI Consultant
to the Board

APPENDIX D

OTHER REPORTS AND DOCUMENTS

Page

1. Board Notification BN-84-161, memorandum from D. G. Eisenhut to Commissioners, dated September 24, 1984, transmitting memorandum from R. Heishman to R. Vollmer, "Completion of Piping Review Activities for Diablo Canyon", dated September 10, 1984. D.1-1

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 24 1984

Docket Nos.: 50-275
and 50-323

MEMORANDUM FOR: Chairman Palladino
Commissioner Roberts
Commissioner Asselstine
Commissioner Bernthal
Commissioner Zech

FROM: Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

SUBJECT: DIABLO CANYON - COMPLETION OF PIPING REVIEW ACTIVITIES (BOARD NOTIFICATION NO. 84-161)

In accordance with NRC procedures for Board Notifications the enclosed memorandum from R. Heishman (I&E) to R. Vollmer (NRR) dated September 10, 1984 is provided for your information. The memorandum provides the results of a review team effort on the implementation of commitments made by PG&E to the NRC in a letter of June 26, 1984 in response to an NRC letter of June 20, 1984. The matters involve activities performed by onsite engineering groups, including training, procedure control, QA audits and findings, and implementation of tolerance clarification program. We previously reported to the Commission on this matter at the August 2, 1984 meeting (transcript pages 84 to 86).

The review was performed specifically with respect to the full power licensing effort for Unit 1. The PG&E submittal of June 26, 1984 applies also in part to Unit 2. The staff will evaluate this aspect.

By copy of this memorandum the Appeal Board and the parties to the Diablo Canyon proceeding are provided the same information.

Frank J Miraglia
for Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc: See next page

cc: J. F. Wolf, ASLB
G. O. Bright, ASLB
J. Kline, ASLB
T. S. Moore, ASLAB
W. R. Johnson, ASLAB
J. H. Buck, ASLAB
SECY (2)
EDO
OGC
OPE
Parties to the Proceeding

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 10, 1984

MEMORANDUM FOR: Richard H. Vollmer, Director
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Robert F. Heishman, Chief
Reactor Construction Programs Branch
Division of Quality Assurance, Safeguards, and Inspection Programs
Office of Inspection and Enforcement

SUBJECT: COMPLETION OF PIPING REVIEW ACTIVITIES FOR DIABLO CANYON

As described in my memo to you dated July 11, 1984, a team composed of myself, D. Allison (IE), A. DuBouchet (consultant) and J. Crews (RV) performed a review of the implementation of commitments made to the NRC in Enclosure 3 to PG&E Letter No. DCL-84-238 dated June 26, 1984 (Attachment 1). This review was performed during the period July 17-21, 1984 at the Diablo Canyon Project offices in San Francisco and at the plant site.

Specifically, this review looked at programmatic provisions for current and future work. Based on the inspection sample it appears that:

(1) Training programs are up to date and are being kept current.

(2) Engineering procedures are adequate and are being implemented.

(3) Audits, responses and corrective actions are adequate and timely.

(4) Cancellation of the tolerance clarification program has effectively addressed concerns about the controls in this area.

(5) The transfer of design responsibility to the home office has been effectively carried out.

Attachments 2, 3 and 4 address the detailed results of the review conducted in the Corporate Offices as they relate to the previously identified deficiencies. It should be noted that the original deficiencies were identified in the Onsite Project Engineering Group organization, however, due to the transfer of the design engineering responsibility to the home office, the team reviewed the implementation in the current organization.

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Attachment 5 addresses the onsite review of current activities of OPEG which are related to the previously identified deficiencies.

Robert F. Heishman, Chief
Reactor Construction Programs Branch
Division of Quality Assurance, Safeguards,
and Inspection Programs
Office of Inspection and Enforcement

Attachments:
As stated

cc w/attachments:
R. DeYoung
J. Taylor
H. Denton
J. N. Grace
D. Eisenhut
G. Knighton
J. Crews, Region V
A. DuBochet
I. Yin, Region III

ENCLOSURE 3

RESPONSE TO ITEM 3 OF NRC LETTER DATED JUNE 20, 1984

NRC Request for Additional Information

"3. Provide those measures that are currently in place or are to be instituted on current and future work activities performed by any and all onsite engineering groups in the following areas:

a. personnel indoctrination and training to assure effective implementation of all QA and technical program requirements;

b. upgrading of site procedures and avoidance of use of unauthorized documents to perform work functions;

c. upgrade of the procedural control of preliminary design data and design interfaces between onsite groups and offsite groups;

d. improvement in the timeliness of project responses to site personnel safety concerns and QA audit findings;

e. plans for the conduct of QA program audits that will ensure that all aspects of design control requirements are implemented in accordance with program provisions and ensure that the audit results are thoroughly evaluated prior to accepting any corrective actions;

f. modification of tolerance clarification program implementation to assure that adequate design reviews are made prior to major hardware modifications."

PGandE Response

The Onsite Project Engineering Group (OPEG), which is the multidiscipline engineering organization located at the jobsite, is an extension of the Project engineering organization in San Francisco. As is typical of resident engineering groups at most nuclear power plant construction sites, OPEG includes representation from the various Project discipline groups, operates in accordance with the Project engineering procedures, and has the basic function of facilitating onsite resolution of engineering problems for construction, startup, and operations. OPEG was established primarily (1) to facilitate coordination between Construction and Design Engineering, (2) to provide more direct feedback to design engineering on construction, startup, and operations matters, and (3) to perform certain design engineering activities (e.g., small bore piping design) that were believed best performed in proximity to the physical plant.

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Coincident with the completion of essentially all Unit 1 engineering activities, a decision was made on June 14, 1984, to no longer perform final safety-related design engineering work in OPEG. All such remaining activities are now being performed by the Project engineering organization in San Francisco for both Unit 1 and Unit 2. Certain support engineering activities, including those associated with safety-related installations, involving tasks such as field walkdowns, construction feasibility checks, and interfacing to clarify construction and startup problem definitions will continue to be performed by OPEG personnel. Project Engineer's Instruction (PEI) No. 9, which defines the scope and responsibilities of the OPEG organization, is currently being revised to clearly define these changes to OPEG's engineering scope and authority.

The following sections address the specific NRC requests for additional information concerning procedures and practices governing current and future work activities at OPEG.

a. Indoctrination and Training

The current personnel indoctrination and training program was discussed in PGandE letter DCL-84-131, dated April 4, 1984, as follows:

> "The current training program consists of a four hour orientation to the Engineering Procedures Manual and an indoctrination in Quality Assurance. The trainee is advised of the contents of the Manual, its arrangement, and the subjects covered by individual procedures. The various forms used in the design process, such as calculation cover sheets, Engineering Material Memoranda, Discrepancy Reports, are presented in the context of the applicable procedure. The content of the current training program is substantially the same as that which was in place since the inception of the Project."

The Project commitment to training program improvements to better administer and document training at OPEG was also discussed in PGandE letter DCL-84-046, dated February 7, 1984, to the NRC:

> "In order to better implement Project training requirements, the Project proposes the following new actions for OPEG:
>
> 1. Training records of all engineering personnel working on the Project have been reviewed. Effective immediately, any person who currently does not have the required training in QA and engineering procedures will not be allowed to continue engineering design work until such training is completed.
>
> 2. Weekly training sessions in QA/Engineering procedures will begin immediately to train new arrivals. Also, a refresher course will be held three times a year for all engineering personnel who complete or who have completed QA/Engineering procedures.

3. No person newly assigned to OPEG will be permitted to perform, check, or approve any calculation until the QA/Engineering procedure training has been completed.

4. Failure to complete a refresher course within 30 days of requirement will disqualify an engineer from performing, checking, or approving any calculation.

5. All training personnel will utilize a formal syllabus which shall be reviewed and approved by Engineering and QA management. Initially, the training sessions shall be monitored by Engineering and QA management to assure that required matters are properly addressed. Training sessions will give special attention to changes in procedures that have been implemented in the last year.

6. All such training requirements will be formalized and documented, and compliance will be verified by QA audits."

These actions have been implemented.

b. Improvements to Procedures

The improvements that have been made to avoid use of unauthorized documents to perform work functions were described in PGandE letter DCL-84-046, dated February 7, 1984, as follows:

"1. Document Control Procedures and practices are being reviewed with onsite Engineering personnel. They have been notified of the importance of complying with document control procedures and of their responsibility to update manuals and return acknowledgement forms.

2. Procedure P-1 was revised in Rev. 4 dated January 30, 1984 to require a monthly supervisory review of controlled manuals to assure that procedures, instructions and criteria are kept current.

3. For future revisions to design procedures, the supervisor will discuss the content of the revision with engineers under his supervision to be sure everyone is aware of changes and how they are to be implemented. Alternatively, procedure changes which are now routed to all manual holders will be formally routed to all engineers and will require an acknowledgement signature."

And further:

> "Project Engineering Procedures (EMP-3.3) provide for the use of references such as textbooks, catalogs, monographs and other such accepted industry techniques in specific calculations. The reference must be documented when necessary to provide details of the design sufficient to allow independent review.

> In such cases, it is required that they be documented as formal references with the calculation in which they are used. Their use then is checked and approved via the calculation review and approval process. In the future, approvals of this material will be provided where general project standardization in their use is applicable. These materials will be formalized, controlled, and included in procedures manuals with appropriate instructions, qualifications and limitations."

These actions have been implemented.

c. Procedural Control of Interfaces

> DCP procedures require the control of preliminary design data. One aspect concerns preparation of calculations that use preliminary design data or assumptions requiring later verification. All such calculations are required to be classified and identified as "Preliminary". Piping calculation packages identify the items requiring verification at a later design stage. When all such items have been verified, a formal revision to the calculation is made to designate the calculation as "Final". Reviews are performed to assure that all calculations reach "Final" status to assure that any preliminary information in the calculation has been properly finalized. Procedures also require that calculation logs include the status (i.e., preliminary or final) of each calculation to provide improved control.

This process was supplemented by the institution of additional procedural controls over the use of preliminary seismic input assumptions for small bore piping design. This matter was previously addressed in PGandE's response dated March 6, 1984, (DQA) to Joint Intervenor's Motion of February 14, 1984, as follows:

> "167 Design of small bore piping relies upon seismic spectra inputs from DCMs C17, C28, and C30 developed by the Civil discipline and seismic anchor movements (SAM) of large bore piping to which the small bore piping connects. It is normally desirable to delay the analysis of small bore piping until all such inputs are finalized. However, the Project recognized that some schedule advantages could be gained by beginning with preliminary seismic input assumptions for the analysis of small bore piping, with final analysis being completed as final seismic input became available.
>
> The use of this initial preliminary input data is not of concern since subsequent finalization of the calculation would have corrected any differences in the input information. The process of ensuring that the latest seismic input was used in calculations was controlled by Piping Procedure P-27. This procedure required documented review of all calculations affected by C-17, C-28, and C-30, to perform new analyses where required, and to respond, in writing, when all actions were complete. While it was recognized that response spectra and

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> structural movements were undergoing a complete review, controlled copies at the seismic input criteria were assigned to OPEG in early 1983. As C-17, C-28, and C-30 were finalized, the reviews required by piping procedure P-27 were performed thus assuring that all final input information was included in the calculations." (DQA Response, Breismeister et al. Affidavit at 66, 67)

A second aspect of controlling preliminary design data concerns information originally provided by telephone. DCP procedures require such information to be confirmed in writing and controlled as discussed in previous PGandE submittals as follows:.

> "Engineering Manual Procedure (EMP) 6.1, Section 4.4, specifically provides that all design information provided verbally must be confirmed in writing. If the data are used prior to such confirmation, the calculations must be marked "preliminary" and cannot be finally approved without such confirmation. This requirement is an additional measure to assure that preliminary data are confirmed before the calculations are reviewed for final approval." (PGandE letter DCL-84-131, dated April 4, 1984, at page 57)

> "212 It is possible that, during certain periods, onsite personnel may have had a delay in obtaining information from San Francisco. To minimize this inefficiency, onsite engineering personnel were temporarily relocated to the home office in order to provide data to onsite engineers. This information was transmitted in some cases by phone in order to expedite the performance of preliminary calculations. Engineering Manual Procedure 6.1, Section 4.4 specifically stated that all design information provided verbally must be confirmed in writing. Engineering Manual Procedure 3.3, Section 4.1.2 provides that data requiring verification at a later design stage be identified and the calculation cover sheet marked "Preliminary" until verified. This was the procedure used for such circumstances throughout the reverification program. While this practice is allowed, it was not commonly used except for brief periods or special cases. In all cases, data was subsequently provided by normal document control procedures and verified prior to finalizing affected calculations." (DQA Response, Breismeister et al. Affidavit at page 82)

Project QA audits have specifically reviewed implementation of these controls, and will continue to emphasize this area.

The second part of the Staff's question involves procedural control of design interfaces between onsite groups and offsite groups. The interfaces between OPEG and the home office Project engineering organization are procedurally defined.

The basic interface between these groups was discussed in PGandE letter DCL-84-046, dated February 7, 1984, at page 36 as follows:

> "OPEG is an extension of the home office project engineering organization which is located in a different geographical area. This relationship is defined in the DCP Nuclear Quality Assurance Manual (NQAM) Section I No. 7. As part of the

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> project engineering team, OPEG carries out the Engineering Department's responsibilities outlined in NQAM Section I No. 7, as directed by the Project Engineer to whom OPEG reports (Reference NQAM Section I No. I, Figure 7).
>
> The specific duties, responsibilities, and authority of OPEG at the Diablo Canyon jobsite are delineated in procedure PEI No. 9, Rev. 0. The accomplishment of these duties and responsibilities is delegated through the Engineer to lead discipline engineers, then to the discipline group engineers. Assignment of these duties and responsibilities is made by the OPE/AOPE and lead discipline engineers. The organizational chain within OPEG is defined both in PEI No. 9 and in a written organization chart maintained by the Onsite Project Engineer.
>
> The authority and duties of personnel shown on the established organization chart are delineated in writing as follows:
>
> a. Onsite Project Engineer/Onsite Assistant Project Engineer responsibilities and authorities are defined in PEI No. 9, Paragraphs 3.3 and 3.4. Signature authority of the OPE/OAPE is defined in PEI No. 9, paragraph 4.3, and responsibility for approval of design changes initiated by OPEG is defined in PEI No. 9, paragraph 4.2.4. Additional duties are defined in other procedures applicable to design of piping and piping supports, consisting of Engineering Manual procedures; Piping Group Controlled Procedures, Instructions and Criteria; and Project Engineer's Instruction (Reference PEI No. 9, Paragraph 4.2.1)."

Piping group procedures provide details of design interfaces between OPEG and home office engineering covering such areas as communication of revised seismic response spectra, changes in piping movements, and changes in loads on pipe supports.

As previously noted, the interfaces between OPEG and home office engineering are being substantially modified to reflect OPEG's reduced scope of activity. These changes will be documented in a revision to PEI-9.

d. Timeliness of PGandE Responses

PGandE and the Diablo Canyon Project organization have taken actions to facilitate the expression of safety concerns by site personnel and to provide for a timely response to such concerns when received. The primary action has been the establishment of a "Quality Hotline" (See DQA Response, Shiffer et al. Affidavit, Exhibit 11) at the Diablo Canyon Plant. The "Quality Hotline" allows site personnel to freely express concerns (anonymously if desired) and provide a method for timely feedback on resolution of these matters to the concerned individual.

DCP QA procedures also provide methods for on-site engineering personnel to bring to management attention design issues which they believe could

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potentially affect the safe design, construction, or operation of the Diablo Canyon Power Plant. These methods were previously discussed in the DQA Response, Breismeister et al. Affidavit at page 36 as follows:

"84. Diablo Canyon Project written procedures stress bringing potential problems to the attention of engineering supervision in a timely manner so that appropriate steps can be taken to identify and implement any corrective action necessary to resolve the concern and prevent future recurrence.

85. Engineering Manual Procedures covering Discrepancy Reports (Procedure 10.1, paragraph 3.1) and Nonconformance Reports (Procedure 9.1, paragraph 4.1.1) both specifically state that anyone who believes he has identified a potential engineering discrepancy or nonconformance should bring the matter to the attention of the appropriate Engineering Department group leader or supervisor for resolution.

86. These clearly written project procedures do not restrain or prevent engineers from discussing potential problems with representatives of quality control or the NRC. These procedures recognize that many concerns raised by engineers are of a nature that may easily be resolved by the supervisor who possesses a broader knowledge of the project. If needed, the supervisor may involve staff specialists or engineers from other disciplines to assist. In no event does management discourage engineers, or any other person, from raising legitimate concerns. (See Exhibit 1, dated March 22, 1982, and referencing previous policy statements dating back to the 1970s.)

87. Quality Assurance and Quality Engineering personnel have been physically located within OPEG and have been available at any time to discuss and assist with the resolution of quality problems. Training sessions were held in support of the written procedures. The training sessions on the Engineering Manual procedures, which are mandatory for engineering personnel, specifically include a description of Discrepancy Reports and Nonconformance Reports."

And further:

"89. Additionally, the Bechtel Power Corporation, San Francisco Power Division Instruction 3-17, "10 CFR Part 21, Reporting of Defects and Noncompliances," applies to and is implemented by the Diablo Canyon Project. This instruction defines responsibilities, establishes requirements, and provides guidance for actions necessary to meet the reporting requirements of 10 CFR 21. Procedural requirements to initiate evaluation and reporting pursuant to 10 CFR 21 are also contained in this instruction. The instruction is posted in Diablo Canyon Project work areas for reference. Also, PGandE has posted 10 CFR 19 reporting

> instructions and a copy of Form NRC-3 which gives guidance for contacting the NRC and the regional NRC phone numbers and addresses. These documents have been posted in all PGandE facilities (i.e., PGandE headquarters, construction offices, and operating facilities as well as in the OPEG offices."

Once concerns have been identified on a Discrepancy Report or Nonconformance Report, DCP procedures require that they be resolved promptly. Engineering Manual Procedure 10.1, paragraph 3.4.1 requires (for Discrepancy Reports):

> "3.4.1 The engineer/supervisor shall investigate the discrepancy and:
>
> a) provide for a prompt resolution of the specific discrepancy
>
> b) identify the cause, if possible and
>
> c) take steps to prevent recurrence, if necessary."

The timely progress of resolution of Discrepancy Reports is monitored by both Quality Engineering and Project Quality Assurance. Any overdue Discrepancy Reports are identified on the "Delinquent Open Item Report" which is provided to Project Management on a monthly basis. Management has strongly emphasized timely response to such open items.

Similarly, Engineering Manual Procedure 9.1 concerning Nonconformance Reports (NCRs) require that any engineering problems reported as a potential nonconformance to the Engineering Group Leader or Group Supervisor be evaluated within three working days to confirm that a Nonconformance Report should be issued. Timely resolution of NCRs is tracked on a monthly status report, as well as a "Quality Problem Report Status Report" issued as frequently as weekly to PGandE and DCP Management.

Timely response to audit findings is also being stressed. Any overdue responses are identified on the "Delinquent Open Item Report" for management attention. Additional measures taken for DCP audits are described in PGandE letter DCL-84-131, dated April 4, 1984, at page 16 as follows:

> "Project QA has re-emphasized to Engineering the need for timely response to audit findings, and is placing additional emphasis on aggressive follow-up. To add further management controls, Project Quality Assurance recently implemented, and has issued on a weekly basis, a "QA Open Items Summary." This report provides the status of each open Quality Audit Finding, including the scheduled dates for QAF response, approval, and closure, and is distributed to appropriate project management."

Actions taken to improve responsiveness to PGandE audit findings were described in PGandE letter DCL-84-131, dated April 4, 1984, as follows:

> "The NRC Inspector identified three findings from PGandE audits 20703, 20813, and 20917 as having untimely responses without documented justification for the delays. There have been some PGandE QA audit findings for which timely responses were not submitted. For some of these delayed responses, verbal

> extensions were requested and granted. When PGandE management became aware of this problem with audit responses in November 1982, Nonconformance Report (NCR) DCO-82-QA-N005 was issued. The NCR was addressed to the QA Department rather than to the audited organization because QA sets the policy on responses time to audit findings. Part of the corrective action for this NCR was a revision to QA procedures to redefine audit response requirements, including a provision to ensure that justified delays to responses are authorized in writing. Since all audit findings are now prioritized and appropriately resolved prior to significant changes in plant operating status, there is no impact of these observations for low power testing or commercial power operation."

e. QA Audits

Planning and rescheduling of PGandE program audits are systematically controlled to ensure that all QA program elements will be covered by program audits. These measures were described in PGandE letter DCL-84-131, dated April 4, 1984, at page 77 as follows:

> "The PGandE program includes two types of audits. The first type are Program Audits. Program audits provide coverage of all QA Program elements as required by Regulatory Guide 1.33 and 1.144. A Program audit is a documented activity performed to verify by examination and evaluation of objective evidence that the company's, or supplier's QA program has been developed, documented, and effectively implemented. The second type is the Activity audit. Activity Audits are equivalent to the activities which some utilities refer to as surveillance or monitoring. PGandE documents the activity as an audit and evalautes any findings as audit findings. Activity audits provide additional monitoring of specific activites and are supplementary to the Program audits. An Activity audit is a documented activity performed to verify that a specific task conforms to the applicable requirements of the company's or a contractor's/supplier's QA Program.
>
> Program audits are scheduled in accordance with a procedure for specific areas of the QA Program over a 2-year period or more frequent in accordance with regulations. Activity audits are scheduled whenever desired to cover scheduled work activities. When a Program audit cannot be performed due to a lack of activity in the areas to be audited it must be rescheduled in order to meet our regulatory commitments."

DCP Project audits are also planned in advance to ensure that all aspects of design control are implemented. A Master Audit Plan is prepared to identify all required audit areas, the corresponding audit scopes and the basic control documents defining quality requirements for each audit area. A schedule is developed identifying those audit areas which are to be audited during each quarter, including the schedule for at least a year in advance. This planning is used to provide full coverage of Project activities on a schedule that is consistent with the Project schedule for the activities being audited. Relative to OPEG, this audit program has included all the major areas of design activity such as control of calculations, control of design drawings, indoctrination and training, and design change control. Project Audits are supplemented by Project QA monitoring activities (documented quality reviews similar to audits) and by Management Audits performed by Bechtel San Francisco Power Division Quality Assurance.

Project QA audit and monitoring acitivites at OPEG were substantially increased during 1984 as part of the Project's continuing effort to assure that all aspects of design control are implemented at OPEG.

The second part of Item (e) concerns the thorough evaluation of audit results prior to acceptance of corrective actions. Methods for evaluating responses to PGandE audits were described in PGandE letter DCL-84-131, dated April 4, 1984, at page 8 as follows:

> "All PGandE audit findings are documented on Open Item Reports (OIRs) or NCRs, and the corrective actions to those findings are evaluated by PGandE QA supervisors for identification of causes, preventive measures taken, and possible generic implications. When an audit finding is documented on an NCR, the review for generic implications is documented on the form under Corrective Action. Every NCR is investigated by a specially appointed Technical Review Group (TRG) whose responsibility, in part, is to evaluate and document the cause, resolution, and corrective actions required to prevent recurrence for each deficiency. Part of determining the "corrective actions to prevent recurrence" is the TRG's investigation into the generic implications of the deficiency.
>
> For audit findings considered not "significant" (as indicated in 10 CFR 50, Appendix B, Criterion XVI), they are not identified in an NCR nor were these issues documented on the audit finding form. However, the evaluation for generic implications does take place and was a basic part of the review of all audit findings. A recent revision to QA procedures requires the audited organization to document their investigation into each finding to determine the cause, the measures to prevent recurrence, and the generic implications."

Responses to Project audit findings are also evaluated for acceptability prior to closure. Project QA reviews the response to assure that the recommended remedial, investigative, and corrective actions (or acceptable alternates) have been performed. Satisfactory implementation of these actions is verified by Project QA, and justification for closure is documented on the Quality Audit Finding form. The Project Quality Assurance Engineer reviews the closure actions taken and reissues the Audit Report when he is in agreement that all findings have been satisfactorily closed. If audit findings are considered "significant", they are documented on an NCR and evaluated in the same way as described in the preceding paragraph.

As indicated in PGandE letter DCL-84-131, dated April, 1984, at pages 16 and 18, DCP audit findings related to OPEG were not closed prior to corrective action taking place.

f. Modification of Tolerance Clarification Program

A discussion of modifications to the Project procedures to assure that adequate reviews are made prior to major hardware modifications was presented in PGandE letter DCL-84-203, dated June 1, 1984, as follows:

> "In order to eliminate potential concerns with the PSDTC program, the following steps are being taken:
>
> 1. The PSDTC program, as defined in Project Engineer's Instruction 12, is being discontinued effective June 8, 1984. Any future Unit 1 pipe support design changes will be effected by the Design Change Notice process of the Engineering Manual Procedure 3.6ON.
>
> 2. In order to facilitate field resolution of pipe support related construction problems on Unit 2 in the future, a new Field Change Request (FCR) procedure is being instituted under Project Engineer's Instruction 19. The FCR procedure will apply to all deviations proposed by Construction from pipe support designs issued by Engineering where the proposed deviations are beyond approved installation tolerances or existing delegation of design responsibility. Construction will initiate requests for such deviation on an FCR form and submit them to Engineering for review and approval. The engineering approval of the FCR will include justification for acceptance and will document any required coordination which has occurred with other discipline groups to determine acceptance. Where a calculation is required to verify the adequacy of the proposed change, the calculation will be completed in accordance with Engineering Manual Procedure 3.3 prior to approval of the FCR. The engineering approval of an FCR will be indicated by the signature of the responsible engineer, the group supervisor, and the Project Engineer.
>
>   In the case of deviations proposed by Construction which do not alter the functional design characteristics of the pipe support or which are minor design drawing clarifications, General Construction Lead Discipline Engineers can authorize in-process work to continue on an "at-risk" basis for up to five days while Engineering approval of the FCR is being obtained. The authorization will be in writing and will be included in the pipe support work package before the work can proceed. This in-process change authority will expire and work so authorized will cease if Engineering approval is not received in five days.
>
> 3. For all pipe support modifications for Unit 1 or Unit 2, the pipe support as-built drawings will continue to include any modifications authorized by a previous PSDTC or an FCR such that no deviations will exist between the as-built drawing and any modifications authorized in the field. The final engineering acceptance of the installed condition will continue to be the final engineering review, checking, and approval of the as-built pipe support drawing."

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ATTACHMENT NO. 2

TRAINING OF ENGINEERING PERSONNEL

By letters dated February 7, 1984 and June 26, 1984 the licensee formalized commitments to training program improvements to better administer and document training at the Onsite Project Engineering Group (OPEG). The staff reviewed the implementation of these commitments.

"1. Training records of all engineering personnel working on the Project have been reviewed. Effective immediately, any person who currently does not have the required training in QA and engineering procedures will not be allowed to continue engineering design work until such training is completed."

A review of records (Quality Action Request No. 11-OPEG, dated December 15, 1984 and official training records) revealed that those individuals who were identified as not having received training in the Engineering Manual and/or Nuclear Quality Assurance Manual within 30 days of assignment to work requiring such training were subsequently administered the required training. Project procedures have been revised to require that individuals for whom engineering manual and QA program training is required shall receive this training prior to originating, checking or approving any design document. The previous requirement was that such training be received within 30 days of assignment.

"2. Weekly training sessions in QA/Engineering procedures will begin immediately to train new arrivals. Also, a refresher course will be held three times a year for all engineering personnel who complete or who have completed QA/Engineering procedures."

Training sessions for new personnel have been scheduled and administered to assure that these individuals receive such training prior to performing safety related work. Through a review of official training records and discussions with newly hired personnel (three individuals selected at random) the staff verified that such training was being conducted prior to individuals performing safety related work.

The first of three times a year refresher courses for OPEG personnel commenced at the Diablo Canyon site during the week ending July 13, 1984. A formal syllabus, approved by Engineering and QA management, together with a multi-page lesson outline was verified by the staff to be utilized for this course. The scope of the training included changes to the Engineering Manual procedures and major changes to Project Manager's Instructions. The session was scheduled to continue during the week ending July 27, 1984 to cover quality audit findings and corrective actions. The staff observed that formal attendance lists were being maintained for each session of the course. The course was attended by Engineering and QA management representatives.

"3. No person newly assigned to OPEG will be permitted to perform, check, or approve any calculation until the QA/Engineering procedure training has been completed."

The staff verified that Project Engineer's Instruction (PEI) No. 15, Training, had been revised to require that individuals performing safety related engineering activities shall receive training on the Engineering Manual and Nuclear Quality Assurance Manual prior to originating, checking or approving any design document. The staff verified that this requirement had been implemented. (See Item 2, above).

"4. Failure to complete a refresher course within 30 days of requirement will disqualify an engineer from performing, checking, or approving any calculation."

Project procedure (PEI No. 15) was verified by the staff to include the provision that failure to complete retraining within 30 days of the requirement shall disqualify personnel from originating, checking, or approving any design document until retraining is completed. The same PEI (No. 15) requires that Project Engineering personnel complete retraining on the Engineering Manual and Nuclear Quality Assurance Manual every two years.

Discussions with project personnel revealed that in late May 1984 it was discovered that 32 individuals had failed to complete the required two year retraining. An examination of project records by the staff revealed the following regarding this matter. Of the 32 individuals, a period of less than 15 days had elapsed beyond the period permitted for retraining for 17 individuals. A period of between 15 and 60 days had elapsed in the case of 11 individuals, and a period of approximately 4 to 5 months had elapsed in the case of 4 individuals.

Project records also included written responses describing corrective actions and justification of the acceptability of safety related activities, if any, performed by the individuals during the period which had elapsed since retraining was due. In essentially all cases either the individual had not performed safety related work or such work was subsequently reviewed by another qualified individual or by the same individual after completing the required retraining. The staff found the corrective actions to be acceptable.

"5. All training personnel will utilize a formal syllabus which shall be reviewed and approved by Engineering and QA management. Initially, the training sessions shall be monitored by Engineering and QA management to assure that required matters are properly addressed. Training sessions will give special attention to changes in procedures that have been implemented in the last year."

The staff determined from a review of training records that a formal syllabus, approved by Engineering and QA management, was utilized by training personnel in the conduct of refresher training for OPEG personnel. Engineering and QA management representatives were in attendance during such training, which included a discussion of changes to the Engineering Manual procedures which had been implemented during the past two years.

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"6. All such training requirements will be formalized and documented, and compliance will be verified by QA audits."

The staff determined that training requirements for Engineering personnel had been formalized in the form of approved written Project procedures and instructions.

Project records included the report of a QA audit of Diablo Canyon Project training conducted on April 17-20, 1984. There were two adverse findings of the audit. One involved a calculation performed by an individual, temporarily assigned to the Project, who had not received the required training. The second finding was that incomplete records had been maintained for training conducted on three occasions between October 1983 and March 1984.

The licensee also committed, with regard to improvements to procedures, that:

> "3. For future revisions to design procedures, the supervisor will discuss the content of the revision with engineers under his supervision to be sure everyone is aware of changes and how they are to be implemented. Alternatively, procedure changes which are now routed to all manual holders will be formally routed to all engineers and will require an acknowledgement signature."

The staff determined that Project procedure (Nos. P-39, Rev. 0 and P-33, Rev. 2 for Units 1 and 2, respectively) include requirements for the distribution, review and explanation of Engineering procedures and changes thereto. These procedures provide for either the conduct of a training session (Unit 1) or formal routing of changes (Unit 2) to Engineering procedures to assure that all engineers affected by the procedure change are made aware of such changes.

The staff examined Project records and verified for recent revisions to procedures (I-6, I-50, P-11, P-16, P-26 and M-9) training sessions were held with Unit 1 engineers, wherein the impact of the procedure revisions were discussed.

Based on the review discussed above the staff concluded that the licensee's training commitments were being implemented effectively.

ATTACHMENT NO. 3

TIMELINESS OF PROJECT RESPONSES TO SITE PERSONNEL SAFETY CONCERNS AND QA AUDIT FINDINGS

The staff reviewed measures to improve the timeliness of project responses to site personnel safety concerns and QA audit findings.

PG&E and project procedures contain provisions for bringing safety concerns to the attention of management, such as by initiating Discrepancy Reports. They also provide that safety concerns may be elevated to higher levels of management or reported to the NRC. These procedures were reviewed by the staff and found to be appropriate.

In addition, a quality hotline was established in January 1984 where site personnel or home office personnel may report quality concerns, anonomously if desired. About 65 items had been reported under this program. The reported items had been documented, investigated and resolved in a timely manner. The originators of the reports had been informed of the resolutions where possible. The staff's review indicated that the program was being implemented and reported concerns were being resolved in a timely manner.

Project procedures also contain provisions for timely resolution of Discrepancy Reports, Non-conformance Reports and audit findings. With respect to one of these elements, PG&E audit findings, the procedural requirements for timely responses were recently strengthened. For all of these elements, responses are being tracked with systems intended to bring late responses as well as schedule problems to the attention of management. The staff's review indicated that the procedures and tracking systems are responsive to the concern for timely response and are being implemented. In addition, timely responses are generally being obtained. For example, each month the Delinquent Open Item report lists all cases of delinquent responses to discrepancy reports, PG&E audit findings and Project audit findings. An average of about 2 items per month appeared from February through July 1984, down from an average of about 10 per month in the previous 6 month period.

Based on a review of the procedural provisions and their implementation the staff concludes that these measures are responsive to the concern and are being implemented.

The staff reviewed plans to conduct audits of design control in program areas and ensure thorough evaluation of results.

Some PG&E audit findings are documented on Non-Conformance Reports (NCR's). Every NCR is investigated by a Technical Review Group (TRG) whose responsibility is, in part, to evaluate and document the cause, resolution and corrective action to prevent recurrence. In accordance with recent procedure changes, other PG&E audit findings are documented on Audit Finding Reports (AFR's).

On this form, the Quality Assurance Department suggests corrective actions that seem appropriate (remedial, investigative and prevent recurrence). For all PG&E audit findings, the audited organization is required to conduct further investigation to determine the extent of corrective actions required and the responses are reviewed for adequacy prior to closure.

With respect to project audit findings, the project QA organization suggests corrective actions that appear appropriate and reviews the responses from the audited organizations for adequacy prior to closure.

The staff reviewed these program elements and found that they were being implemented. There was a minor inconsistency between the procedure and the actual practice for scheduling PG&E audits of suppliers. However, the actual practice was acceptable and PG&E personnel were aware of the matter and intend to revise the procedure in August 1984. No deficiencies were noted in the audit plans and schedules. A sample of recent audits indicated appropriate corrective actions.

Based on a review of the procedural provisions and their implementation the staff concludes that these provisions are responsive to the concern and are being implemented.

ATTACHMENT NO. 4

PROCEDURES

The staff reviewed the procedures governing the analysis and design of large and small bore pipe and supports. The following elements were specifically reviewed:

(1) definition of analysis and design criteria;

(2) identification of critical analysis and design interfaces;

(3) instructions for assembling pipe stress and support packages.

This review was conducted to determine whether the governing procedures were adequate to enable PG&E technical staff to perform piping and support analysis and design in a consistent and timely manner.

Three tiers of technical documents control the PG&E analysis and design effort for large and small bore pipe and supports:

(1) Engineering Manual;

(2) Project Engineering Instructions;

(3) Procedures, Instructions and Memoranda.

Diablo Canyon Project engineering activities are controlled by the Engineering Manual and the Project Engineering Instructions. The Procedures, Instructions and Memoranda provide technical guidance to the PG&E technical staff. Procedure P-1 defines the procedures applicable to DCP Units 1 and/or 2.

Procedure P-11, Procedure for Piping Stress Analysis Diablo Canyon Units 1 and 2, governs the analysis and design of large and small bore piping.

Procedure P-6, Procedure for Assembling Pipe Support Calculation Packages Units 1 and 2, and Memorandum Number 9, Guidelines for Design of Pipe Supports, govern the analysis and design of large and small bore pipe supports.

Safety-related design engineering activities for small bore piping and supports were transferred from the Onsite Project Engineering group to the PG&E San Francisco Home Office on June 14, 1984. These organizational changes are defined in the latest revision to Project Engineering Instruction Number 9. A number of technical procedures were also revised to reflect this organizational change. Procedure P-11 was reviewed for adequate reference to analysis and design criteria. Instructions are provided for loads, load combinations and stress allowables. Geometry definition of piping and supports is discussed, including decoupling procedures for piping subsystems, frequency cutoff criteria, valve modelling and node point spacing. Material properties and insulation weights are provided.

Procedure P-11 was reviewed to determine if critical analysis and design interfaces had been properly identified. Instructions are provided for the control of seismic response spectra, seismic anchor movements, equipment nozzle loads, valve accelerations and pipe support loads. Procedure P-11 was finally reviewed to evaluate instructions for assembling pipe stress packages. A number of forms are provided to control both input and generated data, including a check list containing 85 review items.

The staff reviewed Memorandum No. 9 for definition of pipe support design and analysis criteria. Instructions are provided for allowable loads and load combinations, allowable stresses, frequency and stiffness criteria, welding requirements and code jurisdictional boundaries. Memorandum Number 9 was reviewed for identification of critical analysis and design interfaces. Instructions are provided for the control of reactions generated by pipe stress analysis, and review of applicable support loads by the Civil Engineering Group.

Procedure P-6 was reviewed to evaluate instructions for assembling pipe support packages. Twenty one attachments are provided to enable uniform preparation of support packages, including forms for the calculation of weld stresses, spring and snubber loads and movements, and concrete expansion bolts and baseplates.

The staff concludes that the scope, detail and organization of these implementing procedures should enable a competent engineer to perform piping and support analysis and design in a consistent and timely fashion.

The staff sampled a number of small and large bore pipe and support packages to assess conformance with the governing technical procedures. A total of twenty four pipe stress and support packages were selected at random. The latest revision dates of these packages varied from 06/07/83 to 06/20/84.

These packages were reviewed to verify proper documentation of design information and control of critical analysis and design interfaces. The index to one of the six large bore stress packages reviewed is listed below:

(1) Cover Sheet
(2) Analysis Issue
(3) Stress Isometric
(4) Stress Summary
(5) Valve Qualification
(6) Response Spectra Request
(7) Input Data
(8) Thermal Mode
(9) Hanger Guidance
(10) Input Listing
(11) Waldown Information
(12) Attachment A (Thermal Mode Information)
(13) Attachment B (W TAM/SAM Displacements)
(14) Attachment C (Valve Information)
(15) Attachment D (Miscellaneous & Field Information)
(16) Attachment E (Final Calculation)

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Sections 5, 6, 9 and 11 are critical interface items. Section 5 contains a valve acceleration sheet which tabulates the qualification accelerations and the accelerations generated by the pipe stress analysis, which is coordinated between the Mechanical and Piping Groups. Section 6 defines the applicable response spectra used in the pipe stress analysis, which is coordinated between the Civil and Piping Groups. Section 9 tabulates the reactions and displacements for use in support design, which is coordinated within the Piping Group. Section 11 details the rerouting of piping and valves, which is coordinated between the Piping Group at the San Francisco Home Office and the Onsite Project Engineering Group.

The staff confirms that the pipe stress and support packages selected for review were organized and documented in accordance with the governing technical procedures.

ATTACHMENT NO. 5

ONSITE REVIEW OF CURRENT ACTIVITIES

A review of site training and employment records indicated that engineering personnel joining OPEG during the period 2/84-7/84 received the EMS and NQAM training prior to assignment to OPEG except for 1 individual who received training upon arrival at the site. Additionally, the required refresher training was in progress during the inspection and except for 2 individuals who were detailed off-site. The OPEG engineers had received the first of two training sessions consisting of EMS and Project procedure changes and current topics relative to identified problems. The remainder of the refresher training was scheduled to be presented during late July 1984.

Review of site controls, procedures, and instructions indicated that OPEG engineering personnel have access to appropriate manuals and procedures in their work area with an average of 5 engineers per set of Project Instructions and 10-30 engineers per Engineering Department Manual. Interviews with a sample of engineers representing the Piping, Pipe Support, Walkdown and Stress Analysis groups indicated the instructions needed to do the job were available and additional copies could be obtained by request.

Review of site records and interviews with engineers who previously were a part of the Tolerance Clarification (TC) program confirmed that the TC program was terminated effective June 8, 1984. Training was conducted on June 6, 1984 to explain the termination of the TC program and its replacement by the Field Change Request program for Unit 2 (PEI 19) and the DCN program for Unit 1. The engineers interviewed (3) indicated a good understanding of the new program. Construction Procedure PI-42 Rev. 0 dated May 24, 1984, was reviewed and found to contain controls which allows a temporary Field Change Request containing a 5 day limit, to permit construction to continue while engineering evaluates the change. This condition was only applicable to Unit 2 and appeared to contain appropriate controls to prevent abuse.

Site Audit program records were reviewed and auditors interviewed to determine if site audits were being conducted in accordance with requirements. A sample of 5 audit reports were reviewed covering the period January-July, 1984. The subjects of the audits were: Design Calculation; Engineering Drawings and Design Change Notices; Control & Processing of Discrepancy Reports (OPEG); Indoctrination and Training; and Control of Implementing Procedures. A number of findings were made and Corrective Actions required. Corrective Actions appeared timely and adequate.

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APPENDIX E

LIST OF DIABLO CANYON ALLEGATIONS
IN NRC TRACKING SYSTEM

Appendix E

List of Diablo Canyon Allegations in NRC Tracking System

Appendix E is the complete listing of allegations that were considered and evaluated by the NRC staff as part of its allegation effort. The listing includes the following information:

Allegation Number (ALLEG #): Each individual item of concern is given a Diablo Canyon Allegation File (DCAF) number. This number aids in the tracking of the concern and provides a cumulative total of the Diablo Canyon allegations.

Responsibility (RESP): This field identifies which NRC staff group is responsible for the evaluation of a particular concern:

NRR - Office of Nuclear Reactor Regulation
OI - Office of Investigation
OIA - Office of Inspector and Auditor
RV - Region V
RV-C - Region V/Consultant
RV-P - Region V/Licensee
RV-R - Region V/Resident Inspector

Response Letter (RESPONSE LTR #): This field shows the letter number and/or the date of a response from PG&E regarding the PG&E evaluation of an allegation.

Closing Reference (CLOSING REF): This field displays, as applicable, an Allegation Board Meeting (ABM) and date (e.g., ABM 7/12/84) or Inspection Report (e.g., 84-11), that responds to and closes the allegation. This field also shows the number of the staff Safety Evaluation Report Supplement (SSER; e.g. 26, 28) that addresses the closeout of the allegation.

Unit 2 Applicability (UNIT 2): This field shows, according to the following code, the staff determination regarding the applicability of each allegation to Units 1 and 2:

U - The allegation was specific to a particular unit but was unfounded; therefore, it was not necessary to consider whether the allegation was applicable to the other unit.

D - The allegation was specific to Unit 1 and does not apply to Unit 2.

R - The allegation was specific to Unit 1; however, the resolution applies to both units.

E - The allegation was not specific to either unit; however, the resolution applies to both units.

P - The allegation and resolution were programmatic in nature; therefore, the resolution is applicable to both units.

NS - The allegation involved a component or aspect of the facility that is not safety related.

Characterization (CHARACTERIZATION): Each item of concern is characterized by one or two sentences to catalogue and briefly describe the item. This field only briefly describes the concern; the actual staff evaluation addresses the allegation as supplied by the alleger. For cases in which the assessment of an allegation is catalogued under a related allegation, this field is a cross-reference, directing the reader to the related allegation where the assessment can be found.

Allegation Tracking System (ATS) Number: Each document received by Region V is given a Region V ATS number. This number allows agency-wide tracking of the document containing the item(s) of concern, and is the reference number for filing the allegation information in the region's hard copy file system. The ATS number is identified on the individual assessments (Appendix E) but is not entered in this Appendix E.

This appendix lists 1726 allegations in numerical order. In addition, two allegations (6A and 61A) are included, resulting in a total of 1728 allegations listed in this appendix.

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0001	OI		22	E	SENSITIVE
0002	OI		22	P	SENSITIVE
0003	NRR		21	E	THE PRESSURE BOUNDARY OF THE NONESSENTIAL LOOP OF THE CCWS WAS NOT QUALIFIED FOR THE SSE
0004	NRR		21	E	FAILURE TO CLOSE THE ISOLATION VALVE TO THE CCWS CONCURRENT WITH A LOCA WOULD RESULT IN AN INCREASED LOAD ON THE CCW HEAT EXCHANGERS BEYOND THEIR DESIGN HEAT REMOVAL CAPABILITY
0005	NRR		21/26	E	FOLLOWING A LOCA THE CCWS COULD NOT REMOVE SUFFICIENT HEAT TO MAINTAIN THE DESIGN TEMPERATURE AND ASSURE A SAFE SHUTDOWN (SEE SSER 26, PG E-3)
0006	NRR	PG&E LTR 4/4/83	21	E	INSTRUMENTATION AND CONTROLS REQUIRED TO PERFORM SAFETY RELATED FUNCTIONS DO NOT CONFORM TO SEISMIC CATEGORY 1 REQUIREMENTS
0006A	NRR		21	E	SEE AT PAGE 180
0007	NRR	DCL-84-172/206/222	21/22	E	SEISMIC CATEGORY I/CATEGORY II INTERFACE (SEE ALLEGATION 48)
0008	NRR	DCL-84-035	21/22	E	SEISMIC DESIGN OF DIESEL GENERATOR INTAKE AND EXHAUST
0009	NRR	DCL-84-172	21/22	E	BOARD NOTIFICATION NO. 83-17 INVOLVES THE TESTIMONY OF AN NRC STAFF WITNESS (J. CONRAN) IN THE SHOREHAM PROCEEDING (SEE ALSO ALLEGATION 48)
0010	NRR	PG&E LTR 7/1/83	21	E	TILTING OF THE CONTAINMENT STRUCTURE UNDER EARTHQUAKE MOTIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0011	NRR	PG&E LTR 7/1/83	21	R	INADEQUATE CLASSIFICATION OF THE PLATFORM BETWEEN THE CRANE WALL AND THE SHIELD WALL
0012	NRR	DCL-84-041/137	21/22/33	R	THE HIGH ENERGY LINE BREAK (HELB) ASSESSMENT DID NOT MEET THE FSAR OR R.G. 1.46
0013	NRR	DCL-84-176/206/222	21/22/26	NS	INADEQUATE SEISMIC SYSTEMS (SEE ALSO ALLEGATION 48 AND SSER 26, PG E-5)
0014	NRR	PG&E LTR 7/1/83	21	R	ANALYSIS FOR THE CONTAINMENT ANNULUS STRUCTURE DID NOT INCLUDE ALL POTENTIAL LOADS
0015	NRR	PG&E LTR 10/14&27/83	21	E	INADEQUATE TORNADO DESIGN CRITERIA FOR THE TURBINE BUILDING
0016	NRR	PG&E LTR 7/1/83	21	R	INADEQUATE DESIGN OF HIGH ENERGY RUPTURE RESTRAINT CRUSHABLE PADS
0017	NRR	DCL-84-117	21	E	SEISMIC CRITERIA FOR WESTINGHOUSE ITEMS:NSSS SSE LOADS INADEQUATE
0018	OI		ABM 7/26/85,22/33	E	SENSITIVE
0019	OI		ABM 6/20/85,33	E	SENSITIVE
0020	RV		22	P	LICENSEE'S HEALTH PHYSICS PERSONNEL ARE NOT QUALIFIED TO AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) REQUIREMENTS
0021	RV		22	P	THE LICENSEE HAS POOR PRACTICES AS FAR AS KEEPING INTERNAL EXPOSURES TO RADIOACTIVE MATERIALS AS LOW AS REASONABLY ACHIEVABLE (ALARA)
0022	RV		22	U	MODIFICATIONS TO THE AIR EJECTOR DISCHARGE RADIO-GAS MONITOR (RE-15) AND

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					THE GAS DECAY TANK DISCHARGE RADIO-GAS MONITOR (RE-22) HAVE MADE THESE MONITORS INSENSITIVE TO XENON-133 AND KRYPTON-85
0023	OI		ABM 3/13/86,22/33	E	SENSITIVE
0024	RV		ABM 7/26/85,22/33	P	SENSITIVE/H.P. FOLEY 1)REJECTED NONCONFORMANCE REPORTS 2)WAS NOT DOCUMENTING NONCONFORMANCE REPORTS 3)HAS INCORRECT PROCEDURES FOR VOIDING NONCONFORMANCE REPORTS
0025	RV		22	P	ALLEGED DEFICIENCIES IN THE INSTALLATION OF CONCRETE EXPANSION ANCHOR BOLTS BY SITE CONTRACTOR H.P. FOLEY
0026	RV		ABM 7/26/85,22/33	P	FOLEY DID NOT DOCUMENT NCRs ISSUED BY FIELD INSPECTORS/SEE ALLEGATION 24
0027	RV		21	P	INADEQUATE WELDING PROCEDURE AND QUALITY OF WELDERS AND MATERIALS USED IN SUPERSTRUT CONSTRUCTION FOR CABLE TRAYS, CONDUITS AND INSTRUMENT SUPPORTS
0028	NRR	DCL-84-117	21/22	R	ANNULUS STRUCTURE REVERIFICATION
0029	RV		21	U	PIPE RESTRAINT DESIGN INADEQUATE
0030	RV		21	U	SAFETY-RELATED EQUIPMENT HAS INADEQUATE/UNTRACEABLE DOCUMENTATION
0031	NRR	DCL-84-063	21/22	E	QA PROCEDURES FOR STRUCTURAL ANALYSIS
0032	NRR	DCL-84-063	21/22	E	SEISMIC ANALYSIS FOR CONTAINMENT
0033	NRR		21	E	THE TURBINE BUILDING IS DESIGNED AS A CLASS 2 STRUCTURE BUT CONTAINS CLASS 1 PIPING AND EQUIPMENT

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0034	RV		84-11,26	E	INCOMPLETE AS-BUILT DRAWINGS
0035	RV		21	P	LACK OF SUPPORT CALCULATIONS FOR SUPPORT OF FLUORESCENT LIGHT FIXTURES (CONTROL ROOM)
0036	NRR	DCL-84-172/206/222	21/22/26	E	RESOLUTION OF FLUORESCENT LIGHT FIXTURE INTERACTION/COMPLETE SEISMIC INTERACTION PROGRAM PRIOR TO EXCEEDING 5% POWER (SEE ALSO ALLEGATION 48 AND SSER 26, PG E-5)
0037	NRR	DCL-84-123	21/26	E	(SSPS) RELAYS THAT INITIATE CLOSURE OF RHR LETDOWN ISOLATION VALVES 8701 AND 8702 PERFORM NO SAFETY FUNCTION (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0038	NRR	DCL-84-123	21/26	E	PG&E IS IGNORING EVIDENCE THAT THE SPURIOUS CLOSURE OF A MOTOR OPERATED VALVE IS NOT "IMPOSSIBLE" (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0039	NRR	DCL-84-123	21/26/28	E	THERE IS NO CONTROL ROOM ANNUNCIATION PROVIDED TO ALERT THE OPERATOR(S) WHEN THE RHR LETDOWN LINE HAS BEEN ISOLATED DURING MODES 4, 5, & 6 (SEE ALSO ALLEGATION 45 AND SSER 26, PG E-10)
0040	NRR	DCL-84-123	21/26	E	THE QUESTION RAISED WAS WITH REGARD TO WHETHER OR NOT THE SINGLE RHR PUMP SUCTION LINE FROM THE RCS HOT LEG MEETS SAFETY RELATED STANDARDS (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0041	NRR	DCL-84-123	21/26	E	POWER SOURCE OF CERTAIN RELAYS IS NOT SHOWN ON CERTAIN DRAWINGS AND THIS CAUSED AN OPERATIONAL PROBLEM, THE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					FAILURE (CLOSURE OF RHR ISOLATION VALVES) (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0042	NRR	DCL-84-123	21/26	E	LICENSEE MANAGEMENT WAS UNRESPONSIVE TO RECOMMENDATIONS TO PREVENT SPURIOUS CLOSURE OF THE ISOLATION VALVES ON THE RESIDUAL HEAT REMOVAL (RHR) SYSTEM (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0043	NRR	DCL-84-123	21/26	R	LOSS OF THE (RHR) SYSTEM ON 9/29/81 DUE TO UNPLANNED CLOSURE OF RHR ISOLATION VALVES, SHOULD HAVE BEEN REPORTED TO THE NRC IN ACCORDANCE WITH 10 CFR 50.72 (SEE ALLEGATIONS 39, 45 AND SSER 26, PG E-10)
0044	RV		21	P	THE LICENSEE FAILED TO PROPERLY PROCESS A NUCLEAR PLANT PROBLEM REPORT
0045	NRR	DCL-84-193/208/251/	26/28	E	DESIGN INCONSISTENCY IN FSAR RHR VALVES (SEE ALLEGATION 39 AND SSER 26, PG E-10)
0046	RV		ABM 7/26/85,22/33	P	H.P. FOLEY QA PROCEDURES VOIDING NCRs INCORRECT/SEE ALLEGATION 24
0047	RV		21	P	THE LICENSEE HAS NOT PROVIDED A PLANT VOICE PAGING/ANNOUNCING SYSTEM AT THE DIABLO CANYON PLANT
0048	NRR	DCL-84-172	21/22/26/28	E	STATUS OF SEISMIC SYSTEMS INTERACTION STUDY
0049	RV		21	P	THE MOTHERS FOR PEACE REPRESENTATIVES STATED DURING AN INTERVIEW WITH NRC REPRESENTATIVES THAT "EMERGENCY SIRENS ARE NOT SEISMIC QUALIFIED"

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0050	RV		21	P	THE SECURITY PLAN SHOULD HAVE BEEN MAINTAINED AND THAT IMPOSING SECURITY JUST THIRTY DAYS PRIOR TO FUEL LOAD IS INADEQUATE
0051	RV		21	P	PLANT PERSONNEL ARE RELUCTANT TO COME FORWARD WITH SAFETY CONCERNS BECAUSE THEIR CANDOR ENDANGERS THEIR JOBS AND MAY SUBJECT THEM TO PUBLIC RIDICULE
0052	RV		21	P	JI CONCERNED THAT LOADING OF FUEL MIGHT BE PERMITTED BEFORE CONSTRUCTION IS COMPLETED AND THAT PERMITTING FUEL LOADING BEFORE HOLDING HEARINGS ON THE SAFETY OF THE FACILITY IS INAPPROPRIATE
0053	OI		ABM 7/26/85,22/33	E	SENSITIVE
0054	RV		21	P	ELECTRICAL CABLE TRACEABILITY HAS BEEN LOST FOR WORK PERFORMED BOTH BY PG&E AND H.P. FOLEY
0055	NRR	DCL-84-046/244/254	21/26	D	BECHTEL APPROVED ANALYSIS OF SMALL BORE PIPE BY ALTERING FAILED ANALYSIS (SEE SSER 26, PG E-5)
0056	RV		21	E	PITTING OF MAIN STEAM AND FEEDWATER PIPING
0057	RV		21	P	PRIOR TO 1983, FOLEY USED UNCERTIFIED AND UNQUALIFIED QUALITY CONTROL INSPECTORS
0058	RV		22	P	FOLEY ALLOWS "RED HEAD" ANCHORS STUDS REPORTED IMPROPERLY INSTALLED/ SEE #25
0059	RV		21	P	FOLEY HAS LOST THE TRACEABILITY OF INSTALLED ELECTRICAL CABLE IN NUMEROUS CASES

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0060	RV		22	P	SENSITIVE/A SITE CONTRACTOR (H.P. FOLEY) HAS BEEN PURCHASING MATERIAL THROUGH UNAPPROVED VENDORS
0061	RV		84-11,26	P	SENSITIVE/LACK OF DOCUMENT CONTROL
0061A	RV		21	U	SEE AT PAGE 180
0062	RV		22	P	SENSITIVE/A SITE CONTRACTOR (H.P. FOLEY) HAS NOT ADEQUATELY PERFORMED SAMPLING OF CABLE PULLING AND TERMINATION PROGRAM
0063	RV		21	P	SENSITIVE/A SITE CONTRACTOR (H.P. FOLEY) HAS LOST MATERIAL TRACEABILITY THROUGH IMPROPER UPGRADING OF NON-CLASS 1 MATERIAL TO CLASS 1 MATERIAL
0064	RV		21	P	SENSITIVE/CONCRETE GROUT TEST SAMPLING BY A SITE CONTRACTOR (H.P. FOLEY) WAS BASED ON A SPECIALLY PREPARED TEST SAMPLE, AS OPPOSED TO ACTUAL FIELD SAMPLES
0065	RV		84-11,26	P	SENSITIVE/A MAJORITY OF FOLEY QA RECORDS HAVE NOT BEEN REVIEWED BY DOCUMENT ANALYSTS
0066	RV		ABM 7/26/85,22/33	P	DEFECTIVE WELD REPORTS BY FOLEY/SEE #24
0067	RV		21	U	NEGLIGENCE BY PG&E IN RESPONSE TO FLOODING AT 55FT LEVEL OF AUXILARY BUILDING PIPE TUNNEL
0068	RV		83-37, 22	P	NUCLEAR SERVICES CORPORATION (NSC) CONDUCTED AN AUDIT OF PULLMAN POWER PRODUCTS--FINDINGS IMPLIED A BREAKDOWN

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					IN THE PROGRAMMATIC ASPECTS OF PULLMAN'S QA PROGRAM
0069	RV		21	NS	CONGRESSMAN EDWARD J. MARKEY RAISED QUESTIONS RELATED TO THE REVISION OF DRAFT CASE STUDY C BASED ON THE LICENSEE'S RESPONSE TO DRAFTS PROVIDED TO THEM BY THE NRC
0070	OI		ABM 7/26/85, 33	P	SENSITIVE
0071	RV		22	E	SENSITIVE/USE AND SALE OF DRUGS
0072	RV		21	P	INADEQUATE PG&E QA PROGRAM SINCE LICENSE SUSPENSION
0073	RV		22	E	SENSITIVE/SELLING OF DRUGS
0074	RV		21	E	DEFECTIVE PIPE HANGERS/SEE ALLEGATION 91
0075	RV		21	U	THE CONCERN EXPRESSED WAS THAT THE ACCUMULATOR 1-2 DISCHARGE PIPING WAS ROUTED TOO CLOSE TO AN ADJACENT OPERATOR VALVE SUPPORT
0076	RV		21	NS	U-BOLTS HAVE FAILED AS EVIDENCED BY PHOTOGRAPHS OF A DEFORMED U-BOLT SUPPLIED BY THE ALLEGER
0077	RV		21	NS	STEEL PLATE VALVE SUPPORT STRUCTURE IS BENT, AS EVIDENCED BY A PHOTOGRAPH SUPPLIED BY THE ALLEGER
0078	RV		21	U	DRAIN LINE SUPPORT BRACKET BOLTED TO THE FLOOR WITH ONLY ONE ANCHOR BOLT IN UNIT 2 AS EVIDENCED BY PHOTOGRAPH SUPPLIED BY THE ALLEGER

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0079	NRR	DCL-84-046/244/254	21/26	D	ENGINEERS ARE CALCULATING STRESSES IN PIPING IN A VARIETY OF WAYS (SEE SSER 26, PG E-5)
0080	RV		22	P	KRANSDORF CONCLUDED THAT THE LICENSING PROCESS FOR DCNPP SHOULD CEASE UNTIL FOUR ISSUES REGARDING EMERGENCY PLANNING ARE RESOLVED
0081	OI		ABM 2/26/86,33	E	SENSITIVE
0082	OI		ABM 2/26/86,33	E	SENSITIVE
0083	NRR		22	D	SENSITIVE/SITE DESIGN ENGINEERS HAVE NOT BEEN REQUIRED TO WORK USING CONTROLLED DOCUMENTS, RESULTING IN THE USE OF DIFFERENT DESIGN ASSUMPTIONS AND OTHER PROBLEMS (SEE SSER 26, PG E-5)
0084	RV		21	P	LACK OF MANAGEMENT RESPONSIVENESS TO RESOLVE THE ALLEGER'S CONCERN THAT HE WAS NOT PROVIDED WITH CONTROLLED DESIGN PROCEDURES
0085	NRR	DCL-84-046/244/254	21/26	R	U-BOLT DESIGN (SEE SSER 26, PG E-5)
0086	NRR	DCL-84-046	21	R	"CODE BREAK" DESIGN
0087	NRR	DCL-84-046	21/26	D	CALCULATIONS RELATED TO "CODE BREAK" DESIGN DESTROYED (SEE SSER 26, PG E-5)
0088	NRR	DCL-84-046	21/26	D	UNDOCUMMENTED MODIFICATIONS WERE MADE BECAUSE OF CODE BREAK PROBLEMS (SEE SSER 26, PG E-5)
0089	NRR	DCL-84-046	21/26,	D	INTERFERANCE OF PIPE SUPPORTS (ATTEMPTED USE OF UNISTRUT AS A PIPE SUPPORT) (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0090	RV		21	U	EMBEDDED WOOD AND DEFECTIVE CONCRETE WAS DISCOVERED IN A WALL SEPARATING UNIT 1 AUXILIARY SALTWATER SYSTEM (ASW) PUMPS AT THE INTAKE STRUCTURE
0091	OI		ABM 1/3/86,21/33	E	SENSITIVE
0092	RV		22	E	FLARE BEVEL WELDS ARE UNDERSIZED AND DO NOT COMPLY WITH AWS CODE DIHEDRAL ANGLE REQUIREMENTS
0093	RV		22	E	SEE 0092
0094	RV		21	E	PULLMAN USED PIPE WELDING PROCEDURES TO MAKE STRUCTURAL STEEL WELDS
0095	NRR	DCL-84-046	21/26	R	ANGLES OF PIPE SUPPORT MEMBERS ARE OUT OF SPECIFICATION (SEE SSER 26, PG E-5)
0096	RV		22	E	A DISCREPANCY EXISTS BETWEEN MANUFACTURER'S RECOMMENDATIONS AND PG&E DESIGN CRITERIA REGARDING THE MINIMUM SPACING BETWEEN CONCRETE EXPANSION ANCHORS.
0097	NRR		21/26	D	SITE DESIGN ENGINEERS HAVE BEEN REQUIRED TO USE UNCONTROLLED DOCUMENTS (SEE SSER 26, PG E-5)
0098	RV		22	E	BRAND INDUSTRIAL SERVICES COMPANY, BISCO, IS IMPROPERLY INSTALLING PENETRATION SEALS
0099	RV		22	P	1)FALSIFICATION OF VENDOR RECORDS 2)ADDITIONAL ALLEGATIONS CONCERNING WELDER QUALIFICATION, TRAINING, AND QC DEFFICIENCIES

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0100	NRR	DCL-84-29/166/177 DCL-85-058/064	21/22/26/33	E	NO QUALITY CONTROL PROGRAM FOR COATINGS
0101	RV		22	E	DEFICIENCIES IN FOLEY WELDING PROGRAM INCLUDING 1)THE USE OF UNQUALIFIED WELDERS 2)WELDING PROCEDURE SPECIFICATIONS 3)GROSS ERRORS IN PROCEDURES 4)DESIGN ERRORS
0102	RV		84-11,26	P	IMPROPER REFERENCES ON A DCN/SEE #61
0103	RV		22	P	MULTIPLE ALLEGATIONS ASSOCIATED WITH A FAILURE OF THE LICENSEE AND PULLMAN TO MEET REQUIRED CODES AND STANDARDS FOR WELDING PIPE SUPPORTS AND PIPE WHIP RESTRAINTS
0104	RV		22	P	SEE 0103
0105	RV		22	P	SEE 0103
0106	RV		22	P	SEE 0103
0107	RV		22	P	SEE 0103
0108	RV		22	P	SEE 0103
0109	RV		22	P	SEE 0103
0110	RV		22	P	SEE 0103
0111	RV		22	P	SEE 0103
0112	RV		22	P	SEE 0103
0113	RV		22	P	SEE 0103
0114	RV		22	P	SEE 0103

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0115	RV		22	P	SEE 0103
0116	RV		22	P	SEE 0103
0117	RV		22	P	SEE 0103
0118	RV		22	P	SEE 0103
0119	RV		22	P	SEE 0103
0120	OI		ABM 7/26/85, 33	P	SENSITIVE
0121	RV		22	U	INADEQUACIES IN THE IMPLEMENTATION OF THE QUALITY ASSURANCE PROGRAM DOCUMENTING THE ULTRASONIC VERIFICATION OF WALL THICKNESS
0122	RV		22	U	SOME NDE PROCEDURES USED BY PULLMAN WERE NOT PROPERLY QUALIFIED
0123	RV-P	DCL-84-186	ABM 7/12/84,26	E	IMPROPER ACCEPTANCE OF WELDER QUALIFICATION TESTS
0124	RV		22	E	INTERNAL AUDIT PROCEDURE ESD 263 REQUIRED A 10 DAY RESPONSE TIME TO AUDIT FINDINGS.THIS WAS NOT BEING MET
0125	RV		22	P	PIPE RUPTURE RESTRAINT WELDS WERE NOT TESTED PER SPECIFICATION (THIS IS A RESTATEMENT OF ALLEGATION #115)
0126	RV		22	P	SENSITIVE/PG&E HAS NOT IMPLEMENTED A CONSISTENT SET OF WELD SYMBOLS FOR ENGINEERS AND CONTRACTORS
0127	RV		22	P	PG&E DOES NOT COMPLY WITH AWS-D 1.1 REGARDING WELD SIZE AND PREHEAT ON PIPE SUPPORTS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0128	RV		22	P	SENSITIVE/PULLMAN DID NOT PROPERLY ACCEPT PROBLEM REPORTS
0129	RV-P	DCL-84-186	ABM 7/12/84,26	P	IMPROPER ACTIVITIES RELATED TO PULLMAN WELDING
0130	OI		ABM 2/12/86,33	P	SENSITIVE
0131	RV		84-11,26	P	PULLMAN POWER HAS WELDED A-325 BOLTS TO THE CONTAINMENT LINER FOR USE IN PIPE SUPPORT STRUCTURES WITHOUT A QUALIFIED WELDING PROCEDURE SPECIFICATION
0132	RV		22	U	WELDING WAS PERFORMED ON A SECTION OF THE COMPONENT COOLING WATER SYSTEM WITH THE PIPE FULL OF WATER
0133	RV		22	E	FOLEY DID NOT PROPERLY ACCEPT/DOCUMENT REPORTS
0134	RV		22	P	FOLEY DID NOT INVOKE PART 21 ON VENDOR CONTRACTS
0135	RV		22	E	FOLEY AUDITS WERE NOT PERFORMED FOR AN EXTENDED PERIOD
0136	RV	DCL-84-186	84-33,28	E	FOLEY AUDIT FINDINGS WERE NOT PROPERLY HANDLED
0137	RV-P	DCL-84-186	ABM 7/12/84,26	P	FOLEY DID NOT AUDIT PROCEDURE ADEQUACY
0138	RV		22	U	THE INCORE THERMOCOUPLE CIRCUITS WERE IMPROPERLY UPGRADED TO CLASS I CIRCUITS IN THAT WIRE TRACEABILITY WAS LOST
0139	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY IMPROPERLY PERFORMED TUBING FABRICATION(SOCKET WELDING AND BENDING)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0140	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY USED MATERIAL PURCHASED FOR ONE CONTRACT ON ANOTHER
0141	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY PERFORMED TRANSVERSE WELDING ACROSS BEAMS (INSTALLATION OF UNISTRUT)
0142	RV		22	E	FOLEY INADEQUATELY INSTALLED AND CHECKED ANCHOR BOLTS/SEE #25
0143	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY DID NOT TORQUE BEAM CLIPS AT INSTALLATION
0144	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY INSTALLS P110 CONDUIT CLAMPS TOO CLOSE TO CHANNEL EDGES AND THEY MAY SLIP OUT
0145	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY DID NOT SPECIFY RACEWAY MATERIALS IN DETAILS-IMPROPER BOLT HEADS MAY HAVE BEEN USED
0146	RV		22	E	FOLEY DOES NOT KEEP RACEWAYS FREE OF DAMAGING DEBRIS
0147	NRR	DCL-84-064/092	22,33	R	CABLE TRAY AND CONDUITS OF INDEPENDENT AND REDUNDANT TRAINS WERE INSTALLED ON COMMON RACEWAY SUPPORTS
0148	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY QC IDENTIFYING UNSATISFACTORY WORK IN PROGRESS WERE TOLD TO WAIT UNTIL COMPLETION, THEN REJECT
0149	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY DID NOT SUBMIT HVAC AS-BUILT INFORMATION DURING 1981/82--AS BUILT MAY NOT BE CHECKED AGAINST DESIGN
0150	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY PRODUCTION MAY HAVE FALSIFIED STRUCTURAL STEEL AND TUBING HEAT NUMBER RECORDS

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT?	CHARACTERIZATION
0151	RV-P	DCL-84-186	ABM 7/12/84,26	E	1)FOLEY INSTALLS TOO MANY CONDUITS ON SUPPORTS 2)INSPECTION RATE IS TOO HIGH FOR SUPPORTS
0152	RV-R	DCL-84-186	85-08, 33	E	CONCERNS WITH INSTALLATION OF P1331 CONDUIT CLAMPS
0153	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY SPECIFIES 1/8" WELDS ON 3/32" CLAMP MATERIAL
0154	RV		22	P	FOLEY DOES NOT SPECIFY ADEQUATE INSPECTION CRITERIA FOR ANCHOR BOLTS/SEE #25
0155	RV-P	DCL-84-186	ABM 7/12/84,22/26	P	WELDING ON EMBED PLATES CAUSES DISTORSION, MAY DAMAGE PLATES OR ANCHORS
0156	OI		ABM 3/13/86,33	P	SENSITIVE
0157	OI		ABM 3/13/86,33	P	SENSITIVE
0158	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-INADEQUATE SEISMIC LOAD COMBINATIONS
0159	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-STEEL MEMBERS MAY BE OVER STRESSED DUE TO ADDITIONS
0160	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-BRACINGS CARRY AXIAL LOADS AND SUPPORTS
0161	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-TOO MANY ASSUMPTIONS OF CLASS II AND SMALL BORE LOADS
0162	NRR	DCL-84-133	33	P	SENSITIVE/UNIT 2 ANNULUS DESIGN-CALCULATIONS CHANGED BY REVIEWER

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WITHOUT CONSULTATION WITH ORIGINATOR/CHECKER
0163	NRR	DCL-84-133/85-213	33	E	SENSITIVE/UNIT 2 ANNULUS DESIGN-IMPROPER ASSUMPTIONS RELATED TO THERMAL EXPANSION
0164	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-BEAMS NOT CHECKED FOR TEARING FAILURE MODE
0165	NRR	DCL-84-133	28	U	SENSITIVE/UNIT 2 ANNULUS DESIGN-COMPUTER CODE CHECK DID NOT ACCOUNT FOR TORTIONAL STRESSES
0166	RV		22	P	FOLEY QC PERSONNEL ARE CHANGING QUALITY CONTROL DOCUMENTATION WITH NO CONTROLS FOR PROBLEM DOCUMENTATION, REVIEW OF CHANGES BY MANAGEMENT, OR MANAGEMENT REVIEW OF CORRECTIVE ACTIONS
0167	RV		84-11,26	P	FOLEY IS NOT REVIEWING ALL RECORDS IN PREPARATION FOR TURNOVER--ONLY POST SEPTEMBER 1981 RECORDS/SEE ALLEGATION 65
0168	RV-P	DCL-84-186	ABM 7/12/84,26	P	FOLEY DID NOT PROPERLY GROUT BASE PLATE ANCHOR BOLTS
0169	RV-C	DCL-84-186	85-27, 33	U	PULLMAN FAILED TO CONDUCT SUPPORT WELDS AS REQUIRED BY PROCEDURES
0170	RV-P	DCL-84-186	ABM 7/12/84,26	U	SENSITIVE/PULLMAN LOST PIPE TRACEABILITY DUE TO INADEQUATE TRAINING OF FAB SHOP INSPECTORS
0171	RV		22	U	INADEQUATE PLANNING AND ROUTING OF CABLES WITHIN THE PLANT GIVING RISE TO A POTENTIAL FOR INADEQUATE SEPARATION OF REDUNDANT SAFETY-RELATED CABLES AND LOSS OF TRACEABILITY

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0172	RV		22	E	THE TRANSFER OF CABLE TO ALTERNATE REELS-SHORT SECTIONS OF CABLE WERE FREQUENTLY TRANSFERRED FROM THEIR ORIGINAL REEL TO OTHER REELS
0173	RV		22	E	IMPROPER CLEARING OF CABLE WAYS BEFORE PULLING OF CABLES.FAILURE TO ADEQUATELY CLEAR THE CABLE WAYS HAVE RESULTED IN DAMAGE TO CABLES WHEN THEY WERE PULLED THROUGH THE CABLE WAYS
0174	RV		22	E	INADEQUATE CONTROL OF TENSION LEVELS WHEN PULLING CABLES-INADEQUATE CONTROL WAS EXERCISED IN PULLING ELECTRICAL CABLE THROUGH CABLE WAYS AND COULD HAVE RESULTED IN DAMAGE TO CABLES DURING INSTALLATION
0175	RV-P	DCL-84-186	ABM 7/12/84,28	E	INADEQUATE CONTROL HAS BEEN EXERCISED OVER THE TRANSITION FROM INTERIM DRAWINGS TO FINAL DRAWINGS
0176	RV		22	E	ANCHOR BOLTS (TORQUING OF "RED-HEAD" BOLTS)/SEE ALLEGATION 25
0177	NRR		22/26	E	SENSITIVE/RHR PUMP SUCTION LINE VALVE CONTROL.POTENTIAL DAMAGE TO RHR PUMPS DUE TO LOSS OF SUCTION AS A RESULT OF A SINGLE FAILURE (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0178	RV		22	E	THE BORON WORTH VERSUS TEMPERATURE CURVES WRITTEN IN 1976 AND 1978 ARE INCORRECT
0179	RV		22	U	WHILE MEASURING ASW PUMP FLOW PG&E WAS UNABLE TO PROVE THE FSAR REQUIREMENT WAS MET AFTER THREE YEARS OF EFFORT

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0180	RV		22	P	DURING A PRE-OP THREE CCW HEAT EXCHANGER VALVES ASW WERE BROKEN DUE TO A WATER HAMMER
0181	RV		22	U	POOR, INACCURATE AND INCOMPLETE SURVEILLANCE TEST RECORDS FOR THE DIESEL GENERATOR SYSTEM EXIST AT DIABLO CANYON
0182	NRR		22	E	STANDARD DESIGN FLANGES WERE USED ON CLASS 2 PIPING.BOLTS ON FLANGES IN THE CVCS, RHR, AND RCS SYSTEM DID NOT MEET ASME CODE FOR TORQUE
0183	RV		22	E	SENSITIVE/ALLEGER USE OF HARD DRUGS IN PORTABLE TOILETS ON SITE
0184	RV		22	E	UNQUALIFIED FIRE STOP DESIGNS ARE BEING USED
0185	RV		22	E	THESE ALLEGATIONS CONCERN IMPROPER FOAM FIRE STOP INSTALLATION TECHNIQUES BY THE CONTRACTOR, PLANT-THORPE
0186	RV		22	E	SEE 0185
0187	RV		22	E	SEE 0185
0188	RV	DCL-84-186	ABM 7/12/84,26	P	QA BREAKDOWN AT PULLMAN
0189	RV-P	DCL-84-186	ABM 7/12/84,26	E	MAGNAFLUX WELD VERIFICATION PROGRAM ACCEPTED BAD WELDS
0190	RV		22	E	PIPE SUPPORT BASE PLATE INSTALLATION DOES NOT DEFINE BEARING SURFACES
0191	RV-P	DCL-84-186	ABM 7/12/84,26	E	PG&E HAS THE ATTITUDE THAT QC FINDS TOO MANY PROBLEMS.PG&E HAS DIRECTED THAT SHOP WELDS ARE NOT TO BE INSPECTED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0192	RV-P	DCL-84-186	ABM 7/12/84,26	U	ACCEPTANCE CRITERIA CHANGED TO DECREASE WELD FAILURE RATE
0193	RV-P	DCL-84-186	ABM 7/12/84,26	P	POOR QC INSPECTOR SELECTION AND TRAINING
0194	NRR	DCL-84-186	28	E	DOCUMENT CONTROL IS INFORMAL (RULES MADE UP AS THEY GO ALONG)
0195	RV-P	DCL-84-186	ABM 7/12/84,26	E	DOCUMENT CONTROL STAMPS ARE NOT CONTROLLED
0196	OI		ABM 7/12/85,84-21,28	P	SENSITIVE
0197	OI		ABM 7/12/85,84-21,28	P	SENSITIVE
0198	RV-P	DCL-84-186	ABM 7/12/84,26	E	FOLEY QC PERSON INCORRECTLY HANDLES WORK PACKAGES
0199	RV		22	E	FOLEY QC RUSHING WORK TO MEET SCHEDULES
0200	RV-C	DCL-84-186	85-27, 33	E	NDE REPORTS INCONSISTENT WITH CONTRACTORS INSPECTION REPORTS OF WELDS
0201	RV-C	DCL-84-186	85-27, 33	E	NDE REPORTS IMPROPERLY CHANGED WITHOUT PROPER APPROVALS
0202	OI		ABM 1/10/85,28	E	SENSITIVE
0203	RV		22	P	AN INDIVIDUAL WAS CONCERNED THAT SQUARE TUBING USED FOR A SEISMIC SUPPORT CONSISTED OF TWO PIECES WELDED TOGETHER AND NO RECORD OF THE WELD LOCATION RETAINED
0204	RV		22	E	AN INDIVIDUAL EXPRESSED THE CONCERN THAT CONTRACTOR ENGINEERING WAS MODIFYING PG&E DRAWINGS BY ADDING WELD NUMBERS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0205	RV		22	U	A CONCERNED INDIVIDUAL STATED TO AN INSPECTOR THAT UNQUALIFIED ELECTRICAL SPLICES HAD BEEN OBSERVED ON WIRES TO SOLENOIDS AND INSTRUMENTS IN THE CONTAINMENT.ALLEGER COULDN'T PROVIDE SPEC. EXAMPLES.
0206	RV		22	E	AN INDIVIDUAL EXPRESSED THE CONCERN THAT ELECTRICAL CONDUITS MAY NOT BE PROPERLY CONTROLLED
0207	RV		22	E	INADEQUATE TRAINING FOR ALL PULLMAN WORK ACTIVITIES
0208	RV		22	E	UNACCEPTABLE MANAGEMENT ATTITUDE IN THE ADMINISTRATION OF DISCREPANCY REPORTS.
0209	RV		22	U	PULLMAN SUPERVISION (NAMES GIVEN) QUALIFICATIONS INADEQUATE
0210	RV		22	P	QUALIFICATIONS OF OTHER PLANT WORKERS IS QUESTIONABLE
0211	RV		22	E	PULLMAN WELDING NOT DONE IN ACCORDANCE WITH ASME IX
0212	RV		22	P	PULLMAN'S WELDING OF MATERIALS NOT PROPERLY QUALIFIED (NO SPECIFICS PROVIDED)
0213	RV		22	E	INADEQUATE DESIGN OF ALL RACEWAY SUPPORTS AND OTHERS.
0214	RV		22	P	SEE 0103
0215	RV		22	P	SEE 0103

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0216	RV		22	P	SEE 0103
0217	RV		22	P	SEE 0103
0218	RV		ABM 8/23/84,28	E	CABLE SPREADING ROOM FLOOR CONSTRUCTED WITH NON CLASS I BEAMS
0219	RV-C		85-27, 33	P	NO QC ON POST ACCIDENT MONITOR PANEL
0220	RV-C		ABM 7/26/85, 33	P	ELECTRICAL SUPPORT WELDING DOCUMENTATION DOESN'T EXIST FOR PROBLEMS
0221	RV-C		ABM 7/26/85, 33	P	BETASHIELD HOLD TAGS REMOVED
0222	NRR		33	R	FLUD COMPUTER PROGRAM PROBLEMS AT DIABLO CANYON
0223	OI		ABM 12/17/84,28	P	SENSITIVE
0224	OI		ABM 2/12/86,33	P	SENSITIVE
0225	RV-P	DCL-84-195	ABM 7/12/84,26	E	PROCEDURES FOR INSPECTIONS MAY HAVE BEEN AS UNCONTROLLED AS FOR THE WELDS THEMSELVES
0226	RV		84-36,28	E	RECORDS REFLECT QC-ACCEPTED WELDS WHERE NONE EXISTED REMOVAL OF SAFETY-RELATED WELDS WITHOUT QC RECORDS OF THEIR DISAPPEARANCE
0227	RV-P	DCL-84-195	ABM 7/12/84,26	P	WELDS HAVE BEEN REPAIRED WITHOUT REVISING THE RELEVANT DRAWINGS TO NOTE THE DIFFERENCES
0228	RV		84-11,26	U	HYDROSTATIC TEST PROCEDURES FOR TESTS BEFORE JANUARY 27, 1975 ARE MISSING DOCUMENTS, PAGES, AND REQUIREMENTS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0229	RV		84-11,26	U	HYDROSTATIC TEST DOCUMENTATION AFTER 1975 MISSING QA DOCUMENTS (I.E. F78 RELEASE-QC RELEASE)
0230	RV		84-11,26	U	HYDROSTATIC TEST REQUIREMENTS FORMS DID NOT CONTAIN FLUID TYPE, PRESSURE, AND TEMPERATURE (28 CASES)
0231	RV		84-11,26	U	IN 28 CASES PULLMAN'S TEST DOCUMENTATION DOES NOT SATISFY PG&E REQUIREMENTS (EXAMPLE USE OF 2485 VS 2812 PSIG)
0232	RV		84-11,26	U	POST 1978 HYDROSTATIC RETESTS DID NOT ALWAYS HAVE ASSIGNED QC FIELD PIPE RELEASE, DESPITE OTHER RECORDS STATING QC VERIFICATION
0233	OI		ABM 7/26/85, 33	P	SENSITIVE
0234	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN'S APPROVED VENDORS LIST IS DEFICIENT IN THAT "MICROSURFACE ENGINEERING" DID NOT HAVE ADEQUATE QA PER MR. HUDSON'S OCTOBER 1981 AUDIT
0235	RV-P	DCL-84-195	ABM 7/12/84,26	E	EFFECTS OF LACK OF "MICROSURFACE ENGINEERING" QA UPON CALIBRATIONS, TOOLS, AND MEASUREMENTS NOT DETERMINED
0236	RV-P	DCL-84-195	ABM 7/12/84,26	E	CONTRACTOR (FOLEY) DID NOT USE RIGHT PARTS (I.E. BEAM CLAMPS)
0237	RV-P	DCL-84-195	ABM 7/12/84,26	E	WRONG SIZE BEAM CLAMPS USED BY FOLEY TECHNICALLY INADEQUATE
0238	RV		ABM 8/23/84,28	E	WORKER THREATENED WITH JOB LOSS WHEN REPORTING 107 & 108
0239	RV-P	DCL-84-195	ABM 7/12/84,26	E	PROCEDURES UNRELIABLE - COPPER AND STAINLESS TUBING INSTALLATION

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0240	RV-P	DCL-84-195	ABM 7/12/84,26	E	RESUBMITTED TEST PROCEDURES QUESTIONABLE (TUBING)
0241	RV-P	DCL-84-195	ABM 7/12/84,26	E	WELDING AND NDE PROCEDURES QUALIFIED AFTER THE FACT QUESTIONABLE
0242	RV-P	DCL-84-195	ABM 7/12/84,26	E	NO REJECTION CRITERIA (PIPE RUPTURE RESTRAINT BOLTS)
0243	RV-P	DCL-84-195	ABM 7/12/84,26	E	QA INSPECTORS NOT PROMPTLY NOTIFIED OF SPECIFICATION CHANGES
0244	RV-P	DCL-84-195	ABM 7/12/84,26	E	TECHNICIAN NPPR'S REQUIRED FOREMAN APPROVAL
0245	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E VOIDED NPPR'S WITHOUT EXPLANATION
0246	RV-P	DCL-84-195	ABM 7/12/84,26	E	CONSTRUCTION PERSONNEL ORDERED NOT TO WRITE NPPR'S
0247	OI		ABM 7/26/85, 33	P	SENSITIVE
0248	OI		ABM 7/26/85, 33	P	SENSITIVE
0249	OI		ABM 2/12/86,33	P	SENSITIVE
0250	OI		ABM 12/16/85, 33	P	SENSITIVE
0251	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN QA HAD TO MEET ITS SCHEDULE WITH INADEQUATE RESOURCES
0252	NRR		26	D	MANAGEMENT INSTRUCTED ENGINEERS TO CERTIFY THE MODIFICATIONS DID NOT AFFECT THE FSAR, WITHOUT VERIFYING THE CONCLUSION (SEE SSER 26, PG E-5)
0253	RV-P	DCL-84-195	ABM 7/12/84,26	E	MANAGEMENT DID NOT SUPPLY BLANK DISCREPANCY REPORT FORMS

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0254	OI		ABM 2/26/86,33	P	SENSITIVE
0255	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E TECHNICIANS "WERE ROUTINELY DENIED ACCESS TO NECESSARY INFORMATION TO PERFORM THEIR JOBS"
0256	OI		ABM 12/16/85, 33	P	SENSITIVE
0257	RV-P	DCL-84-195	ABM 7/12/84,26	E	TECHNICIANS WERE DENIED CURRENT DRAWINGS AND OTHER REFERENCE MATERIALS
0258	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E FOREMAN PURGED THE TECHNICIANS FILES OF UNCONTROLLED DRAWINGS
0259	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E DOES NOT NOTIFY THE ORIGINATOR OF A DEFICIENCY REPORT THAT A DECISION HAS BEEN REACHED
0260	OI			P	SENSITIVE
0261	NRR	DCL-84-123	26	E	PG&E CONTENTION THAT THIS SYSTEM (RHR) IS NOT SAFETY RELATED IS INCORRECT (BASED ON TMI) SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0262	RV		84-36,28	P	PULLMAN MANAGEMENT INSTRUCTS INSPECTORS TO VIOLATE CONTRACT SPECIFICATIONS BY STAMPING ON THE WELD BECAUSE IT WAS NOT PROHIBITED
0263	RV-P	DCL-84-195	ABM 7/12/84,26	P	REVISED PULLMAN ESD223 ALLOWS EXTRA WELDING NOT REQUIRED BY THE DESIGN, THUS CREATED UNACCOUNTED RESIDUAL STRESS
0264	RV-P	DCL-84-195	ABM 7/12/84,26	P	THE ABOVE REVISION SUGGESTS QA STANDARDS HAVE COLLAPSED
0265	RV-P	DCL-84-195	ABM 7/12/84,26	P	PG&E ACCEPTED THE ABOVE REVISION OF PULLMAN

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0266	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E ACCEPTED WELDS THAT FAILED MT
0267	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E DIRECTED PULLMAN TO ACCEPT WELDS THAT WERE NOT TESTED PROPERLY
0268	RV	DCL-84-195	ABM 7/12/84,26	P	WELD PROCEDURES ARE NOT APPLIED CONSISTENTLY
0269	RV	DCL-84-195	ABM 7/12/84,26	E	IGNORANCE OF INSTALLATION PROCEDURES DUE TO MANAGEMENT POLICY
0270	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN QC MANAGER PROHIBITED INSPECTORS CHECKING A-490 BOLTS CARBON CONTENT SPECIFICATION WHICH IS NOT PART OF INSPECTOR'S JOB
0271	OI		ABM 7/26/85, 33	P	SENSITIVE
0272	OI		ABM 7/26/85, 33	P	SENSITIVE
0273	OI		ABM 7/26/85, 33	P	SENSITIVE
0274	RV-P	DCL-84-195	ABM 7/12/84,26	U	THE ABOVE INDIVIDUAL WAS LAID OFF DESPITE HIS FOREMAN'S REQUEST TO KEEP HIM
0275	RV		84-11,26	U	PG&E MAY HAVE RECEIVED STAINLESS STEEL THAT ARE OUT OF COMPLIANCE WITH RELEVENT CODE DUE TO A 12/9/83 PURCHASE ORDER ERROR
0276	RV		84-11,26	U	THE STEEL RECEIVED FROM THE ABOVE PURCHASE ORDER WILL CAUSE WELDED JOINTS TO BE SUSCEPTIVE TO CORROSION
0277	RV		84-11,26	U	THE ABOVE PURCHASE ORDER ERROR HAS NOT YET BEEN CORRECTED PRIOR TO OPERATION

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ALLEG#	PESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0278	OI	DCL-84-195	ABM 7/26/85, 33	E	SENSITIVE
0279	RV		84-11,26	U	PULLMAN QC LEADMAN ORDERED THE INSPECTOR TO REMOVE HOLD TAG ON WORK DONE ON STAINLESS STEEL WITH UNMARKED TOOLS (SEE ABOVE)
0280	RV		84-11,26	E	A QC INSPECTOR WAS TOLD HE COULD NO LONGER BE ALLOWED TO OCCASIONALLY ACT AS A TEMPORARY LEADMAN, BECAUSE HE WAS NOT SUFFICIENTLY "PRODUCTION ORIENTED"
0281	OI		ABM 7/26/85, 33	P	SENSITIVE
0282	OI		ABM 8/1/85, 33	P	SENSITIVE
0283	OI		ABM 12/6/85, 33	P	SENSITIVE
0284	RV-P	DCL-84-195	ABM 7/12/84,26	P	THE PLANT IS BEING DESIGNED AND BUILT THROUGH MEMORANDA RATHER THAN UNDER CONTROLLED PROCEDURES (SFE #8)
0285	NRR		26	D	MANAGEMENT INSTRUCTED A DESIGN ENGINEER TO APPROVE PIPE SUPPORT REVISIONS MARKED ON AS-BUILT DRAWINGS WITHOUT THE BENEFIT OF AN ANALYSIS (SEE SSER 26, PG E-5)
0286	NRR		26	D	MANAGEMENT KEPT PERSONNEL PARTICIPATING IN THE QUICK FIX PROGRAM IGNORANT OF THE GROUND RULES (SEE SSER 26, PG E-5)
0287	NRR		26	D	A QUICK FIX MEMO DID NOT SUCCEED IN CLEARING UP CONFUSION, BECAUSE IT MISSED MORE OF THE PROGRAM THAN IT COVERED (SEE SSER 26, PG E-5)
0288	NRR		26	D	IN JUNE, 1983 MEMO, MANAGEMENT DIRECTED THAT PSDTC'S "ARE TO BE TREATED IN THE SAME MANNER AS THE ORIGINAL 'APPROVED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					FOR CONSTRUCTION' DRAWING" (SEE SSER 26, PG E-5)
0289	NRR		26	D	ALTHOUGH QUICK FIXES WERE SUBJECT TO LATER REVIEW, MANAGEMENT REPRESENTATIVES TOLD MR. STOKES THAT THE FINDINGS WERE ACCEPTED AT A 98% RATE (SEE SSER 26, PG E-5)
0290	NRR		26	D	THE UNCONTROLLED QUICK FIX AUTHORITY WAS ABUSED (SEE SSER 26, PG E-5)
0291	NRR		26	D	THE QUICK FIX PROGRAM IMPROPERLY SUBSTITUTED FOR THE FORMAL DESIGN AND CONSTRUCTION QA REPORTING SYSTEM THROUGHOUT THE PROGRAM FOR HANGERS (SEE SSER 26, PG E-5)
0292	NRR		26	D	THE QUICK FIX PROGRAM SUBSTITUTED INFORMAL REPAIRS FOR CONTROLLED CORRECTIVE ACTION THROUGH THE FORMAL NONCONFORMANCE SYSTEM (SEE SSER 26, PG E-5)
0293	NRR		26	D	MANAGEMENT OFFICIALS ARBITRARILY LIMITED THE SCOPE OF THE QUICK FIX PROGRAM WHEN PREINSPECTION ENGINEERS TRIED TO USE IT AS A SOLUTION TO QUALITY DEFICIENCIES (SEE SSER 26, PG E-5)
0294	RV-P	DCL-84-195	ABM 7/12/84,26	P	FIELD ENGINEERING PERSONNEL ARE CONSISTENTLY UNTRAINED AND ARE NOT CONSISTENTLY KNOWLEDGEABLE ABOUT WELD SYMBOLS
0295	RV-P	DCL-84-195	ABM 7/12/84,26	P	THE WORD "TYPICAL" HAS BEEN UTILIZED TOO EXTENSIVELY IN VARIOUS INTERPRETATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0296	NRR		26	D	THE QUICK FIX PROGRAM WAS USED TO THWART QC INSPECTORS WHO RAISED PROBLEMS WITH WELD SYMBOLS WHEN THEY REFUSED TO SIGN FOR WELDS THEY COULD NOT READ SYMBOLS FOR (SEE SSER 26, PG E-5)
0297	NRR		26	D	THE RELIABILITY OF THE SEISMIC DESIGN REVIEW IS HAMPERED BY ITS RELIANCE ON DEFICIENT DATA FROM APPARENTLY UNQUALIFIED PERSONNEL DURING 81/82 WALKDOWN OF PLANT (SEE SSER 26, PG E-5)
0298	NRR		26	D	NO ROOM FOR MOVEMENT WITH ATTACHMENTS AND BASEPLATES OBSERVED AS A GENERIC PROBLEM (SEE SSER 26, PG E-5)
0299	NRR		26	R	SEISMIC DESIGN REVIEW FAILED TO ACCOUNT FOR EXTRA RESIDUAL STRESS FROM OVER WELDING (SEE SSER 26, PG E-5)
0300	NRR		26	R	ENGINEERS IN THE SEISMIC DESIGN REVIEW DID NOT HAVE WRITTEN PROCEDURES TO GUIDE THEIR USE OF STRUDL COMPUTER PROGRAM (SEE SSER 26, PG E-5)
0301	OI			P	SENSITIVE
0302	NRR		26	D	QUICK FIX REMOVED WELD SYMBOLS FROM DRAWINGS (SEE SSER 26, PG E-5)
0303	NRR		26	D	INADEQUATE RECORDS OF HANGER CALCULATIONS REQUIRE EXPANDED SAMPLING BY SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0304	NRR		26	D	QUESTIONABLE CONSERVATIVE BASIS FOR SEISMIC DESIGN REVIEW (DOCUMENT 049243) (SEE SSER 26, PG E-5)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0305	NRR		26	D	ANALYSIS ME-101 FOR SEISMIC DESIGN REVIEW DOES NOT REPRESENT CONSERVATIVE ENGINEERING STANDARDS "IN MANY CASES" (SEE SSER 26, PG E-5)
0306	NRR		26	D	MANAGEMENT DID NOT FREELY DISTRIBUTE PROFESSIONAL CODES THAT SUPPOSEDLY PARALLELED COMPUTER ANALYSIS RELIED ON BY ENGINEERS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0307	NRR		26	R	M-9 COMPUTER ANALYSIS FOR ANGLES OMITTED AISC PROVISION FOR ALLOWABLE BENDING STRESS, CONTRARY TO LICENSING COMMITMENTS (SEE SSER 26, PG E-5)
0308	NRR		26	D	MANAGEMENT OFFICIALS OVERRULED ENGINEERS WHO ATTEMPTED TO CALCULATE EFFECTS AND STRESSES OF TORSIONAL LOADS CREATED ON PIPE SUPPORTS DURING INSTALLATION (SEE SSER 26, PG E-5)
0309	NRR		26	D	MANAGEMENT IMPOSED INCONSISTENT STANDARDS FOR MODIFICATIONS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0310	NRR		26	R	BECHTEL ISSUED OUT-OF-DATE COMPUTER STRUDL MANUALS TO ENGINEERS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0311	NRR		26	D	ENGINEERS IN THE STRESS GROUP RELIED ON OUTDATED SEISMIC DATA THAT WAS NECESSARY FOR THEIR CALCULATIONS (SEE SSER 26, PG E-5)
0312	NRR		26	D	BECHTEL'S COMPUTER PROGRAM DID NOT HAVE AN ADEQUATE "MEMORY" FOR ENGINEERS TO

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CONDUCT FULL ANALYSES OF COMPLEX HANGER (SEE SSER 26, PG E-5)
0313	NRR		26	D	THERE WAS NO CONSISTENT PROCEDURE OR CRITERION TO GUIDE ENGINEERS WHO CHECKED CALCULATIONS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0314	NRR		26	D	MANAGEMENT DIRECTED A PURGE OF FILES TO REMOVE ANY EVIDENCE OF PREVIOUSLY DESTROYED OR CENSORED WORK FROM ENGINEERS WHO FAILED HANGERS BUT WERE LATER OVERRULED (SEE SSER 26, PG E-5)
0315	NRR		26	D	WHEN ASSUMPTIONS OR LOADS WERE CHANGED FOR PRELIMINARY CALCULATIONS ON PIPE SUPPORTS THAT PREVIOUSLY HAD FAILED, NO ONE RECEIVED OR CHECKED THE ENTIRE CALCULATION (SEE SSER 26, PG E-5)
0316	NRR		28	D	A BECHTEL OFFICIAL APPROVED THE SEISMIC REVIEW CALCULATIONS EN MASSE OVER SEVERAL DAYS WITHOUT STUDYING AND PROPERLY REVIEWING THE WORK
0317	RV-P	DCL-84-328	ABM 12/20/84,28	E	MANAGEMENT DID NOT HAVE NECESSARY DOCUMENTS FROM VENDORS TO GUIDE CALCULATIONS REQUIRED OF VENDOR PURCHASES FOR STRUCTURAL STEEL SUPPORTS
0318	NRR		26	D	MANAGEMENT DID NOT SEND DRAWING DETAILS AND SUPPORT CONDITIONS TO VALVE MANUFACTURERS AND OTHER VENDORS FOR APPROVAL (SEE SSER 26, PG E-5)
0319	NRR		26	D	MANAGEMENT'S PRODUCTION SCHEDULE FOR SEISMIC DESIGN REVIEW WAS TOO RIGOROUS (SEE SSER 26, PG E-5)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0320	NRR		26	D	ENGINEERS APPROVED HANGERS SOLELY ON THE BASIS OF CONCLUSIONS IN FILE 049243 FOR SIMILAR PIPE SUPPORTS (SEE SSER 26, PG E-5)
0321	NRR		26	D	BECAUSE SITE ENGINEERS HAD TO WAIT UP TO A WEEK TO OBTAIN INFORMATION FROM SAN FRANCISCO OFFICE, DECISIONS WERE MADE WITHOUT NECESSARY INFORMATION (SEE SSER 26, PG E-5)
0322	NRR		26	D	THERE WAS NO SYSTEM USED TO VERIFY ACCURACY OF INFORMATION OBTAINED FROM SAN FRANCISCO OFFICE ON TELEPHONE (SEE SSER 26, PG E-5)
0323	NRR		26	R	ALLEGER REPORTED ERRORS IN THE M-9 COMPUTER ANALYSIS, WHICH INCORRECTLY INSTRUCTED ENGINEERS IN MAKING CALCULATIONS (SEE SSER 26, PG E-5)
0324	NRR		26	D	THE CALCULATIONS USED TO OVERRULE THOSE REJECTING PIPE SUPPORTS WERE LESS SOPHISTICATED THAN THE ORIGINAL CALCULATIONS (SEE SSER 26, PG E-5)
0325	NRR		26	D	ENGINEERS WERE INSTRUCTED TO INDICATE THAT SEISMIC DESIGN REVIEW CALCULATIONS WOULD NOT AFFECT THE FSAR (SEE SSER 26, PG E-5)
0326	NRR		26	D	CALCULATIONS THAT CALLED FOR FIELD MODIFICATIONS WERE ALTERED WITHOUT APPROVAL OF THE ORIGINATOR (SEE SSER 26, PG E-5)
0327	NRR		26	D	MULTIPLE ENGINEERS INDEPENDENTLY PRODUCED PRELIMINARY CALCULATIONS ON THE

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					SAME HANGERS, ALLOWING MANAGEMENT TO PICK AND CHOOSE (SEE SSER 26, PG E-5)
0328	OI		ABM 12/16/85, 33	P	SENSITIVE
0329	OI		ABM 8/1/85, 33	P	SENSITIVE
0330	RV		ABM 8/23/84,28	E	PRE-INSPECTION ENGINEERS DID NOT HAVE ADEQUATE TIME TO FIND AND CORRECT PROBLEMS ON HANGERS
0331	RV		84-11,26	E	UNTIL FEBRUARY 15, 1984, PRE-INSPECTION ENGINEERS DID NOT HAVE AUTHORITY TO LOOK AT WORK ALREADY ACCEPTED, REGARDLESS OF DEFICIENCIES
0332	RV		84-11,26	E	BECHTEL MANAGEMENT DISPLAYED DISREGARD FOR PROFESSIONAL CODES
0333	RV		84-11,26	E	BECHTEL MANAGEMENT PRACTICE COMPROMISES THE LICENSEE'S RECORD ON QUALITY ASSURANCE
0334	RV		84-11,26	E	INACCURATE DRAWINGS MEAN THAT OPERATORS MAY RELY ON INFORMATION THAT CONFLICTS WITH THE APPROVED DESIGN
0335	RV		84-11,26	U	DRAWINGS THAT WILL BE RELIED ON BY OPERATORS ARE INCOMPLETE
0336	RV		84-11,26	U	PG&E MANAGEMENT VERBAL 1983 POLICY WAS THAT FIELD ENGINEERS SHOULD IGNORE ALL PROBLEMS WITH OVIDs
0337	NRR		26	R	PLANT DESIGN DOES NOT REALISTICALLY ACCOUNT FOR THE FULL EFFECT FROM TEMPERATURE VARIATIONS (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0338	RV-P	DCL-84-195	ABM 7/12/84,26	U	FAILURE TO REPORT CRACK ON F.W.212 TO NRC PER 10CFR50.55(e)
0339	RV-P	DCL-84-195	ABM 7/12/84,26	U	QA BREAKDOWN DUE TO FAILURE TO DISCOVER WELDING DEFECTS
0340	RV-P	DCL-84-195	ABM 7/12/84,26	U	FAILURE TO NOTIFY NRC PER 10CFR21/50.55(e) WHEN 100% REINSPECTION OF RADIOGRAPHS REVEALED PREVIOUS MISINTERPRETATION
0341	RV		84-11,26	E	DEFICIENT DESIGN DRAWINGS CAUSED ENGINEERS TO USE DIFFERENT ASSUMPTIONS (1.5T VS 2T VS 3T)
0342	RV		ABM 7/12/84,28	P	LACK OF DOCUMENT CONTROL MEANT ESD 223 WAS NOT APPLIED CONSISTENTLY
0343	RV		84-11,26	E	QC INSPECTORS COULD NOT READ THE WELDING ANGLE AND EFFECTIVE THROAT SYMBOLS ON DESIGN DRAWINGS
0344	RV		84-20,28	U	CATWALK SUPPORT CHANNEL AND FISH PLATES WERE INSTALLED IN THE WRONG PLACE, i.e. NOT IN ACCORDANCE WITH THE DRAWING LOCATION
0345	RV		84-20,28	U	GRINDING GOUGE IN WELD ATTACHING SAFETY INJECTION ACCUMULATOR LINE TO COLD LEG NOZZLE
0346	RV		84-20,28	U	FISHPLATES WELDED TO WIDE FLANGE BEAMS WITH AN OBTUSE ANGLE IN EXCESS OF THAT ALLOWED BY THE WELDING PROCEDURE
0347	RV		84-20,28	E	EXCESSIVE OVERWELDING HAS CAUSED EXCESSIVE SHRINKAGE OF STAINLESS STEEL LINE DUE TO RESIDUAL STRESSES

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0348	RV		84-20,28	E	SHOP WELDING ON LARGE RESTRAINT BENEATH PRESSURIZER DOES NOT CONFORM TO AWS D1.1.THE WELDS ARE RAGGED
0349	RV		84-20,28	U	LUG ATTACHMENTS FOR CONTAINMENT SPRAY DISCHARGE PIPING ARE CALLED OUT TO BE 1/2" FILLET WELDS BUT ARE ACTUALLY 7/16" FILLET WELDS
0350	RV		84-20,28	E	LUG ATTACHMENT WELDS ON CCW LINE ARE REQUIRED TO BE FULL PENETRATION WELDS BUT ARE ACTUALLY FILLET WELDS
0351	NRR	DCL-84-195	26/28	U	SLOTTED HOLES ON RUPTURE RESTRAINTS NOT IN ACCORDANCE WITH ASTM A-325 (SEE SSER 26, PG E-10)
0352	RV	DCL-84-195	ABM 8/23/84,28	U	PG&E'S FAILURE ANALYSIS OF F.W.212 PERFORMED BY PULLMAN IS QUESTIONED.
0353	RV-P	DCL-84-195	ABM 7/12/84,26	U	INCONSISTANCIES IN THE INSPECTION COVERAGE BETWEEN WELDS F.W.197 AND F.W.212
0354	RV-P	DCL-84-195	ABM 7/12/84,26	U	PG&E FAILED TO REPORT WELDING DEFICIENCIES PER 10CFR50.55(e)
0355	RV-P	DCL-84-195	ABM 7/12/84,26	U	PG&E FAILED TO REPORT REJECTABLE INDICATIONS STATED IN DR3370 TO NRC
0356	RV-P	DCL-84-195	ABM 7/12/84,26	U	A RADIOGRAPHIC LEVEL II INSPECTOR ACCEPTED RADIOGRAPHS BEFORE HE WAS CERTIFIED AND THIS NON-CONFORMANCE WAS NOT REPORTED VIA QA SYSTEM
0357	RV-P	DCL-84-195	ABM 7/12/84,26	U	F.W.197 WAS NOT REPAIRED ACCORDING TO THE DIRECTION OF DR 3484.AN INTEROFFICE CORRESPONDENCE WAS USED INSTEAD

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0358	RV-P	DCL-84-195	ABM 7/12/84,26	U	DR 3484 FAILED TO INCLUDE PROPER WELDING PROCEDURE IN THE RECOMMENDED DISPOSITION
0359	RV-P	DCL-84-195	ABM 7/12/84,26	U	CRACK WAS IMPROPERLY REFERRED AS LINEAR INDICATION ON F.W.212 AND PROPER CORRECTIVE ACTION TAKEN IS UNKNOWN
0360	RV-P	DCL-84-195	ABM 7/12/84,26	U	FIVE WELD INSPECTORS WITH LEVEL II STAMPS WITHOUT APPROPRIATE PAPERWORK
0361	RV-P	DCL-84-195	ABM 7/12/84,26	E	WELDING INSPECTOR NOT CERTIFIED TO CERTIFY OTHER WELDERS
0362	RV-P	DCL-84-195	ABM 7/12/84,26	P	WELDERS DID NOT HAVE UNIQUE STAMPS AS REQUIRED BY AWS
0363	RV-P	DCL-84-195	ABM 7/12/84,26	U	MANAGEMENT ROUTINELY ALLOWED WELDERS TO TAKE REQUALIFICATION TESTS DAILY UNTIL THEY PASSED
0364	RV-P	DCL-84-195	ABM 7/12/84,26	P	INADEQUATE TRAINING FOR QC INSPECTORS
0365	RV-P	DCL-84-195	ABM 7/12/84,26	E	TRACEABILITY (HEAT NUMBERS) LOST AFTER MATERIAL
0366	RV	DCL-84-195	84-20,28	U	STAINLESS STEEL T-SECTION OF PIPE WITH A FOUR INCH LINEAR UNDERCUT LEFT UNREPAIRED
0367	RV-P	DCL-84-195	ABM 7/12/84,26	U	GUIDED BEND TEST MACHINE DID NOT SATISFY AWS REQUIREMENTS CONCERNING TOLERANCES BETWEEN SHOE AND DIE IN THE HYDRAULIC JACK
0368	NRR	DCL-84-195	28	D	QUICK FIXES NOT BEING REVIEWED BY QA AND HAD NO SERIOUS ENGINEERING ANALYSIS
0369	RV-P	DCL-84-195	ABM 7/12/84,26	E	PROFESSIONAL CODES NOT AVAILABLE FOR RESEARCH

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0370	RV-P	DCL-84-195	ABM 7/12/84,26	E	UP-TO-DATE COPIES OF QUALITY CONTROL PROCEDURES NOT AVAILABLE
0371	RV-P	DCL-84-195	ABM 7/12/84,26	P	QC LEVEL I INSPECTOR QUALIFIED TO ACCEPT WORK WITHOUT A LEVEL II INSPECTOR IN ATTENDANCE
0372	RV-P	DCL-84-195	ABM 7/12/84,26	P	LEVEL II QC INSPECTOR SIGNING INSPECTION REPORTS WITHOUT PERSONALLY VERIFYING WELDING
0373	RV-P	DCL-84-195	ABM 7/12/84,26	P	QC INSPECTORS WERE NOT GIVEN TESTS AT THE END OF ON THE JOB TRAINING
0374	RV-P	DCL-84-195	ABM 7/12/84,26	P	LESS THAN 50% OF WELDING QC INSPECTORS KNEW HOW TO WELD
0375	RV-P	DCL-84-195	ABM 7/12/84,26	E	SUPERVISION FROWNED UPON THE USE OF RED TAGS BECAUSE OF THE PRODUCTION SCHEDULE
0376	RV-P	DCL-84-195	ABM 7/12/84,26	E	MANAGEMENT ADVOCATED THAT THE QC INSPECTORS PERFORM "COMPLIMENTARY INSPECTIONS"
0377	RV-P	DCL-84-195	ABM 7/12/84,26	U	ELECTRICAL RACEWAY SUPPORT SUPPORTED BY A PIECE OF UNISTRUT THAT HAD BEEN IMPROPERLY CUT AND INSTALLED
0378	RV-C	DCL-84-195	85-27, 33	P	QC INSPECTOR WAS NEVER PROVIDED WITH THE SUPPORT TO PERFORM HIS DUTIES, NOR PROVIDED WITH ADEQUATE TRAINING
0379	RV-P	DCL-84-195	ABM 7/12/84,26	E	LACK OF AN UP-TO-DATE "HEAT NUMBER" LOG
0380	RV-P	DCL-84-195	ABM 7/12/84,26	P	LEVEL II INSPECTOR CO-SIGNING LEVEL I WORK WITHOUT LOOKING AT THE WELDS
0381	RV-P	DCL-84-195	ABM 7/12/84,26	P	UP TO 30% OF THE WELD INSPECTORS WERE NOT QUALIFIED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0382	RV	DCL-84-195	ABM 10/10/84,28	E	ATKINSON-ILLEGALLY PERFORMED INFORMAL WELD REPAIRS; COVERED UP INITIAL DEFICIENCIES WHOSE EFFECTS WILL REMAIN AS DORMANT HAZARDS
0383	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-DURING 1979 THE QA INSPECTION PROGRAM ONLY POORLY ENFORCED THE PREHEAT SPECIFICATION PROGRAM, WHEN AT ALL
0384	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-INVESTIGATION OF WELDING PREHEAT TREATMENT ONLY COVERED WORK IN PROGRESS, NOT COMPLETED WELDING
0385	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-INSPECTOR CONCERNED WITH INADEQUATE PREHEATING OF STEEL GREATER THAN TWO INCHES THICK
0386	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-PROBLEM WITH LACK OF WELD ROD CONTROL
0387	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-MANAGEMENT INTRODUCED ERRORS INTO THE BLUEPRINTS BY SWITCHING IDENTIFICATION CODE ON BLUEPRINTS AND FAILING TO KEEP TRACK OF CHANGES
0388	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-PROPER TORQUING OF BOLTS QUESTION
0389	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-THREE TURBINE BUILDING CAISSONS WERE IMPROPERLY INSTALLED
0390	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-TENSION CABLES TO ANCHOR TURBINE PEDESTALS INCORRECTLY ANCHORED TO SANDSTONE INSTEAD OF GRANITE
0391	RV	DCL-84-195	ABM 6/6/85, 33	P	ATKINSON-MANAGEMENT DISPLAYED A LACK OF COMMITMENT TO QUALITY INSPECTION

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0392	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON-NIGHT SHIFT QA INSPECTION WAS ABOLISHED BECAUSE OF HIGH QUALITY STANDARDS APPLIED
0393	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON-MANAGEMENT WARN QA NIGHT SHIFT TO EASE UP ON APPLICATION OF INSPECTION STANDARDS
0394	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON-MANAGEMENT CANCELLED THE NIGHT SHIFT QA INSPECTION TO ELIMINATE A PRODUCTION OBSTACLE
0395	OI		ABM 12/6/85, 33	E	SENSITIVE
0396	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-WELDERS REWORK CREATED AN UNKNOWN DEGREE OF EXTRA STRESS OF STRUCTURAL WELDS
0397	RV-P	DCL-84-195	ABM 7/12/84,28	E	ATKINSON-INSPECTOR FOUND IT ALMOST IMPOSSIBLE TO GET UNQUALIFIED WELDERS OFF JOB
0398	RV		84-11,26	E	ATKINSON-INSPECTOR FOUND UNDOCUMENTED WELDS PERFORMED BY UNKNOWN WELDERS
0399	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-MANAGEMENT DID NOT SATISFACTORILY ADDRESS REPORTS OF UNDOCUMENTED WELDS
0400	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-TACK WELDING PROCEDURE USED, NOT AUTHORIZED IN APPLICABLE WELD SPECIFICATIONS OR PROCEDURES
0401	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-INFORMAL OR UNDOCUMENTED WELD REPAIRS CREATED MORE DAMAGE THAN EXISTED INITIALLY IN SOME CASES

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0402	RV	DCL-84-195	ABM 10/10/84,28	E	ATKINSON-EFFECT OF UNCONTROLLED WELD REPAIRS WAS TO DESTROY WELD IN SOME CASES-CREATED UNEVEN STRESS
0403	RV-P	DCL-84-195	ABM 7/12/84,26	P	ATKINSON-QA MANAGER DIRECTED QA VIOLATIONS BE INITIALLY REPORTED BY MEMORANDA INSTEAD OF FORMAL NONCONFORMANCE REPORTING SYSTEM
0404	OI		ABM 12/16/85, 33	P	SENSITIVE
0405	RV-P	DCL-84-328	ABM 10/24/84,28	P	ATKINSON-MANAGEMENT INSTRUCTED PRODUCTION CREWS TO IGNORE AND/OR REMOVE QA HOLD TAGS ON WELDS
0406	RV-P	DCL-84-328	ABM 10/24/84,28	P	ATKINSON-PRODUCTION CREWS REMOVED QA HOLD TAG ON WELD AND GROUND IT DOWN SO LOCATION OF WELD WOULD NOT BE EASY TO BE IDENTIFIED
0407	OI		ABM 12/6/85, 33	P	SENSITIVE
0408	RV-P	DCL-84-195	ABM 7/12/84,26	P	ATKINSON-MANAGEMENT IGNORED QA INSPECTOR MEMORANDUM ON HOLD TAG 026 FALSIFICATION
0409	RV-P	DCL-84-195	ABM 7/12/84,26	P	ATKINSON-MANAGEMENT DENIED INSPECTOR AUTHORITY TO ISSUE HOLD TAGS DIRECTLY
0410	RV-P	DCL-84-195	ABM 7/12/84,26	P	ATKINSON-REMOVAL OF QA HOLD TAGS COINCIDED WITH ATTEMPTS TO COVER UP THE FLAWS THAT HAD BEEN CITED
0411	OI		ABM 12/16/85, 33	P	SENSITIVE
0412	OI		ABM 12/16/85, 33	P	SENSITIVE
0413	OI		ABM 12/16/85, 33	P	SENSITIVE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0414	RV-P	DCL-84-195	ABM 7/12/84,26	P	ALLEGER QUESTIONED WHETHER PULLMAN COMPLIED WITH LATEST REVISION TO DESIGN SPECIFICATIONS AND WELDING PROCEDURES
0415	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-DIRECTED INSPECTOR TO ONLY LOOK AT THE INDIVIDUAL WELD ASSIGNED FOR INSPECTION-NOTHING ELSE
0416	RV	DCL-84-195	85-27, 33	P	ATKINSON-INCONSISTENT WELD ACCEPTANCE STANDARDS USED BY DAY AND NIGHT SHIFT INSPECTORS
0417	RV	DCL-84-195	ABM 10/10/84,28	E	ATKINSON-INCONSISTENT WELD ACCEPTANCE BETWEEN DAY AND NIGHT SHIFT INSPECTORS, BASED ON INFORMAL TOLERANCES ESTABLISHED BY MANAGEMENT
0418	RV	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-QUALITY OF EARLY INSPECTORS WAS ERRATIC AND INSPECTION RECORDS SUPERFICIAL
0419	OI	DCL-84-243	ABM 12/6/85, 33	P	SENSITIVE
0420	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-MANAGEMENT INSTRUCTED WELD INSPECTORS TO EMPHASIZE CERTAIN SECTIONS OF ACCEPTANCE STANDARDS AND IGNORE OTHERS
0421	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-INCONSISTENT ACCEPTANCE AND REJECTION OF SIMILAR WELDS
0422	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-INSPECTOR FOUND A 60% FAILURE RATE DURING REINSPECTION OF PREVIOUSLY ACCEPTED WELDS
0423	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-QA MANAGER RESTRICTED ISSUE OF FORMAL NONCONFORMANCE FORMS ON UNACCEPTABLE WELDS

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0424	RV-P	DCL-84-195	ABM 7/12/84,26	E	ATKINSON-QA MANAGER ACCEPTED WELDS WITHOUT A DETAILED/CLOSE UP INSPECTION
0425	OI		ABM 9/25/85, 33	P	SENSITIVE
0426	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN WAS FORCED TO HIRE PEOPLE WHO HAD NO QC EXPERIENCE IN ORDER TO PROVIDE A REQUIRED MINIMUM NUMBER OF INSPECTORS
0427	RV-P	DCL-84-195	ABM 7/12/84,26	P	NO FORMAL TRAINING FOR NEW QC INSPECTORS IN 1982
0428	RV-P	DCL-84-195	ABM 7/12/84,26	E	QC INSPECTORS WORK BETWEEN JANUARY 1983 AND SEPTEMBER 1983 IS SUSPECT BECAUSE OF INADEQUATE TRAINING
0429	RV-P	DCL-84-195	ABM 7/12/84,26	E	QA WAS NOT DOING ITS JOB ADEQUATELY BECAUSE ALLEGER FOUND MORE REJECTED DRAWINGS THAN QA DID
0430	RV-P	DCL-84-195	ABM 7/12/84,26	P	TRAINING WAS NONEXISTANT FOR PULLMAN CRAFT PERSONNEL
0431	RV-P	DCL-84-195	ABM 7/12/84,26	P	PULLMAN STARTED WORK FIRST AND TRIED TO RECTIFY PROBLEMS AFTER THE FACT WITHOUT GOING BACK TO CORRECT ORIGINAL PROBLEM e.g. WELDING WAS PERFORMED WITHOUT REQUIRED WELDING PROCEDURE
0432	NRR	DCL-84-243	26	D	LACK OF EFFECTIVE DRAWING CONTROL EXISTED AT PULLMAN (QUICK FIX) (SEE SSER 26, PG E-5)
0433	NRR	DCL-84-243	26	D	QUICK FIX BECAME THE PLANT DESIGN (SEE SSER 26, PG E-5)
0434	RV-P	DCL-84-195	ABM 7/12/84,26	P	MANAGEMENT IS NOT RESPONSIVE TO QC INSPECTORS CONCERNS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0435	RV-P	DCL-84-195	ABM 7/12/84,26	P	THE SAME QA BREAKDOWN THAT OCCURRED AT PULLMAN ALSO OCCURRED AT GUY F. ATKINSON COMPANY
0436	OI	DCL-84-243	ABM 12/6/85, 33	P	SENSITIVE
0437	OI	DCL-84-243	ABM 12/6/85,33	P	SENSITIVE
0438	OI	DCL-84-243	ABM 8/1/85, 33	P	SENSITIVE
0439	OI	DCL-84-243	ABM 12/16/85, 33	P	SENSITIVE
0440	RV-P	DCL-84-195	ABM 7/12/84,26	U	ALLEGER NOTED A WELDER PERFORMING WORK WITHOUT PROPER PRE-HEAT
0441	RV-P	DCL-84-195	ABM 7/12/84,26	P	NO ONE INFORMED WELDER OF THE REQUIREMENTS HE WAS TO WORK TO
0442	OI		ABM 12/16/85, 33	P	SENSITIVE
0443	RV	DCL-84-195	ABM 8/23/84,28	U	GUARDS DO NOT PAY ATTENTION TO X-RAY SCREENS, AND ONLY GO THROUGH MOTIONS ON THE PATDOWNS
0444	RV	DCL-84-195	ABM 8/23/84,28	U	SECURITY DEPARTMENT OVERWORKED
0445	RV	DCL-84-195	ABM 8/23/84,28	U	SECURITY BREAKING DOWN DUE TO POOR MORALE AMONG GUARDS
0446	RV	DCL-84-195	ABM 8/23/84,28	U	MANAGEMENT HAS NOT INFORMED SECURITY WHAT THEY CAN AND CANNOT DO TO PROTESTORS
0447	RV	DCL-84-195	ABM 8/23/84,28	U	SECURITY COMPUTER IS UNRELIABLE AND IN LAST SEVERAL MONTHS HAS ERRONEOUSLY PERMITTED AROUND A DOZEN HOLDERS OF EXPIRED KEY CARDS TO PASS THROUGH SECURITY

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0448	RV	DCL-84-195	ABM 8/23/84,28	U	PINKERTON DOES NOT ALLOW GUARDS TO RAISE QUESTIONS ABOUT PLANT SECURITY
0449	RV	DCL-84-195	ABM 8/23/84,28	U	IT IS A PUNISHABLE OFFENSE TO RAISE QUESTIONS OUTSIDE OF THE CHAIN OF COMMAND e.g. GO TO PG&E SECURITY WITH A PROBLEM
0450	RV-P	DCL-84-195	ABM 7/12/84,26	U	PULLMAN FAILED TO RECOGNIZE CODE NON-COMPLIANCE
0451	RV		ABM 8/23/84,28	E	PG&E'S RESPONSE ABOUT WELDED ASTM A-325 BOLTS SHOW THAT PULLMAN AND PG&E RETAIN QA GROUPS THAT ARE UNABLE OR UNWILLING TO REPORT CODE VIOLATIONS
0452	RV		ABM 8/23/84,28	U	NRC FAILED TO FOLLOW UP ON A FALSE STATEMENT TO AN NRC INSPECTOR BY PULLMAN
0453	RV	DCL-84-195	ABM 8/23/84,28	U	LACK OF PROPER ATMOSPHERE INSIDE THE CONTAINMENT
0454	RV	DCL-84-195	ABM 7/12/84,26	U	EXCESSIVE PIPING LEAKS E.A. AT THE 85 FOOT LEVEL IN THE TURBINE BUILDING SOUTHEAST SIDE NORTH OF DOOR 129 AND 2 LEAKS AT THE 115 FOOT LEVEL EAST PENETRATION AREA BY DOOR 365
0455	RV	DCL-84-195	ABM 8/23/84,28	U	SECURITY INADEQUATE AS EVIDENCED BY A CHANTING PROTESTOR ENTERING THE SECURITY AREAS
0456	RV-P	DCL-84-195	ABM 7/12/84,26	U	PG&E IS NOT APPROVING THE DESIGN OF ANY 2 INCH AND UNDER HANGERS DESPITE FEBRUARY 17, 1984 LETTER TO NRC STATING THAT THEY HAVE PREPARED THE FINAL APPROVED DRAWINGS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0457	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN'S TRAINING PROGRAM DID NOT ADDRESS THE TECHNICAL OBJECTIVES OF THE PROJECT
0458	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN'S TRAINING PROGRAM DID NOT EXPLAIN THE QUALITY ASSURANCE ELEMENTS TO BE EMPLOYED ON THE JOB
0459	RV-P	DCL-84-195	ABM 7/12/84,26	E	PULLMAN QC INSPECTORS WERE INSTRUCTED TO CONSULT ONLY PULLMAN PROCEDURES FOR COMPONENT EVALUATION AND TO ACCEPT ALL CONDITIONS OUTSIDE OF THE PROCEDURAL SCOPE
0460	RV-P	DCL-84-195	ABM 7/12/84,26	E	PG&E HAS INTENDED TO MISLEAD THE NRC BY MAKING FALSE STATEMENTS IN LETTER DCL-84-067 ABOUT RESEARCHING ASTM A-325 WELDS
0461	RV		ABM 7/12/84,28	P	PULLMAN DID NOT HAVE A WELDING PROCEDURE TO COVER WELDING MECHANICAL FASTENERS
0462	RV-P	DCL-84-195	ABM 7/12/84,26	E	TWO NDE TECHNICIANS WERE CERTIFIED LEVEL II DESPITE LETTERS IN THEIR FILES STATING THAT THEY WERE NOT QUALIFIED
0463	RV-P	DCL-84-195	ABM 7/12/84,26	U	QA MANAGER CERTIFIED LEVEL II FOR MP, RT, LPT, AND LEVEL I UT WITHOUT MEETING REQUIREMENTS
0464	RV	DCL-84-195	84-36,28	E	314 WELDS INSPECTED WITH MAGNETIC PARTICLE TEST IN 4 DAYS BY ONE INSPECTOR
0465	RV-P	DCL-84-328	ABM 10/24/84,28	U	SIGNATURES ON PIPE RUPTURE RESTRAINT WELD PROCESS SHEETS ARE PHONEY, A BLANK WAS SIGNED THEN XEROXED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0466	RV	DCL-84-195	ABM 7/12/84,26	P	QA/QC PERSONNEL INTERMINGLED RESPONSIBILITIES WITH PRODUCTION PERSONNEL DURING 1971-1972
0467	RV-P	DCL-84-195	ABM 7/12/84,26	P	(ITEM 17) PRACTICE OF MIXING QA/QC AND PRODUCTION RESPONSIBILITIES CONTINUED IN 1976
0468	RV-P	DCL-84-195	ABM 7/12/84,26	P	AN INDIVIDUAL USED ONE PROCESS SHEET FOR FIVE WELD JOINTS
0469	OI	DCL-84-243	ABM 7/26/85, 33	P	SENSITIVE
0470	RV-P	DCL-84-195	ABM 7/12/84,26	P	THERE WAS NO FORMAL QA PROGRAM FOR PIPE SUPPORTS AND PIPE RUPTURE RESTRAINTS
0471	RV-P	DCL-84-195	ABM 7/12/84,26	P	ALTHOUGH PULLMAN IDENTIFIED MANY DEFICIENCIES OF ESD 223 IN 1973, THE COMPANY DID NOT LEARN ITS LESSON.THE NSC AUDIT REPEATED SIMILAR FINDINGS IN 1977
0472	RV-P	DCL-84-195	ABM 7/12/84,26	P	PRE-DECEMBER 1973 PIPE SUPPORTS WERE INSTALLED "PRIOR TO IMPLEMENTING THE INSPECTION PROGRAM"
0473	RV-P	DCL-84-195	ABM 7/12/84,26	P	IN THE PAST, PULLMAN DID NOT CONDUCT AUDITS OR PRACTICES TO ASME OR 10 CFR 50
0474	RV-P	DCL-84-195	ABM 7/12/84,26	U	UNTIL NOVEMBER 1978, SOME PARTS OF THE QA PROGRAM HAD NEVER BEEN AUDITED
0475	RV	DCL-84-195	84-36,28	U	MAGNETIC PARTICLE EXAMS FOR AN NDE SUPERVISOR DO NOT SHOW HIS GRADE
0476	RV	DCL-84-195	ABM 7/12/84,26	E	INADEQUATE DOCUMENTATION ON A-325 AND A-307 USAGE - REBUTTAL TO PG&E'S RESPONSE DCL-84-067, DCL-84-078

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0477	RV	DCL-84-195	ABM 7/12/84,26	E	INADEQUATE MATERIAL TRACEABILITY BACK TO CERTIFICATE OF COMPLIANCE FOR THE ABOVE BOLTS - REBUTTAL TO PG&E RESPONSE DCL-84-067
0478	RV	DCL-84-195	ABM 7/12/84,26	E	INADEQUATE TRAINING FOR QA INSPECTORS - REBUTTAL TO PG&E REPONSE DCL-84-067
0479	NRR	DCL-84-195	26	D	MODIFICATIONS PERFORMED DURING THE HOT FUNCTIONAL TEST WERE NOT REPORTED TO THE NRC - REBUTTAL TO PG&E REPONSE DCL-84-094 (SEE SSER 26, PG E-5)
0480	RV-P	DCL-84-195	ABM 7/12/84,26	E	CLAMPING PLATE INSTALLATIONS MAY NOT BE ALL CORRECT - REBUTTAL TO PG&E REPONSE
0481	RV-P	DCL-84-195	ABM 7/12/84,26	E	NO ENGINEERING DOCUMENTS AVAILABLE TO SUPPORT THE PRACTICE OF WELDING UNISTRUT - REBUTTAL TO PG&E RESPONSE
0482	RV	DCL-84-195	84-36,28	E	UNQUALIFIED BRAZING PROCEDURE - REBUTTAL TO PG&E RESPONSE
0483	RV-P	DCL-84-195	ABM 7/12/84,26	E	NO PROCESS SHEETS ISSUED FOR THE REMOVAL OF STANCHIONS AND NO UT WAS PERFORMED AFTERWARDS
0484	NRR	DCL-84-195	28	E	BECHTEL'S FIELD ENGINEER POCKET HANGER REFERENCE WAS NOT FOLLOWED
0485	RV-P		ABM 7/12/84,28	E	PULLMAN WELDERS HAVE BEEN QUALIFIED WITHOUT ANY QA COVERAGE
0486	RV-P		ABM 7/12/84,28	E	MANAGEMENT DID NOT DEMONSTRATE ANY COMMITMENT TO WELDER QUALIFICATIONS WHEN NOTIFIED OF THE VIOLATION

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0487	RV		ABM 7/12/84,28	P	PULLMAN REFUSED TO PROCESS A FORMAL QC REPORT ON THE UNCONTROLLED WELDING QUALIFICATION TESTS
0488	RV-P		ABM 7/12/84,28	E	A PRODUCTION OFFICIAL REFUSED THE QA INSPECTOR ACCESS TO INSPECTION RECORDS
0489	OI		ABM 2/12/86,33	P	SENSITIVE
0490	OI		ABM 2/12/86,33	P	SENSITIVE
0491	RV		ABM 7/12/84,28	E	FROM 1974-1979, WELDER QUALIFICATIONS WERE INDETERMINATE
0492	RV		ABM 7/12/84,28	E	PG&E CHANGED CONTRACT SPECIFICATIONS THROUGH NOTES WITHOUT CONTROLLED REVIEW AND APPROVAL(AWAITING SPECIFICS FROM PG&E-SEE #215)
0493	RV		ABM 7/12/84,28	P	WELDER QUALIFICATIONS CANNOT BE VERIFIED BY RECONSTRUCTING WELD ROD SLIPS
0494	RV		ABM 7/12/84,28	E	IMPROPER WELD PROCEDURE WAS USED TO WELD TUBE STEEL TO PIPE SUPPORTS
0495	RV		ABM 7/12/84,28	P	ASME-BASED WELD PROCEDURE CODE 7/8 WAS IMPROPERLY USED TO WELD THREADED STUDS ON CLASS 1 PIPE SUPPORTS
0496	RV		ABM 7/12/84,28	E	CODE 7/8 WAS USED TO WELD THREADED STUDS TO CONTAINMENT LINER - QA MANAGER "YANKED" THE REPORTING INSPECTOR FROM THE ASSIGNMENT
0497	RV		ABM 7/12/84,28	E	WELDING OF THREADED STUDS VIOLATED CODE 7/8, WHICH CALLS FOR THE USE OF A BACKING BAR

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0498	RV		ABM 7/12/84,28	E	PULLMAN OVEREXTENDED CODE 7/8 BY WELDING COMMON HARDWARE BOLTS, INSTEAD OF THREADED STUDS. CONSTRUCTION CREWS TURNED THE BOLTS INTO STUDS BY CUTTING THE HEADS OFF AND CHISELING TO A POINT
0499	RV		ABM 7/12/84,28	E	THE "HOMEMADE" STUDS NEITHER HAVE CONTROLLED CHEMICAL CONTENTS NOR MATERIAL TRACEABILITY
0500	RV		ABM 7/12/84,28	E	CODE 7/8 WAS USED TO WELD AT LEAST EIGHT PIPE SUPPORT JOINT CONFIGURATIONS, NOT COVERED BY CODE 7/8
0501	RV		ABM 7/12/84,28	E	CODE 7/8 WAS USED ON WELDING PIPE RUPTURE RESTRAINTS TO FIVE METALS DIFFERENT FROM ASME APPROVED P-1 MATERIAL
0502	RV		ABM 7/12/84,28	E	CODE 7/8 WAS IMPROPERLY USED TO WELD "W" SHAPES AND TUBE STEEL TO PIPE RESTRAINTS
0503	RV		ABM 7/12/84,28	E	CODE 7/8 WAS IMPROPERLY USED FOR 11 PIPE RUPTURE RESTRAINT JOINT CONFIGURATIONS
0504	RV		ABM 7/12/84,28	P	PIPE RUPTURE RESTRAINT WELDING WAS CONDUCTED WITHOUT ANY ESTABLISHED OR DOCUMENTED PROCEDURE
0505	RV		ABM 7/12/84,28	E	PULLMAN SUBSTITUED A WELD TECHNIQUE SPECIFICATION (AWS D1.1) AS CORRECTIVE ACTION FOR USE OF ASME PROCEDURES
0506	RV-P		ABM 7/12/84,28	E	QA MANAGEMENT DIRECTED INSPECTORS TO "WINK" AT VIOLATIONS ON GROUNDS THAT DEFECTS WOULD BE CAUGHT BY OTHER DEPARTMENTS

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0507	RV		ABM 7/12/84,28	P	PULLMAN QA MANAGER FAILED TO RESPOND TO AN INSPECTOR'S WRITTEN NOTIFICATION OF THE IMPROPER SUBSTITUTION OF A WELDING TECHNIQUE FOR AN APPROVED PROCEDURE
0508	OI		ABM 4/3/86,33	P	SENSITIVE - 0130
0509	RV		ABM 7/12/84,28	P	EVEN IF WELD TECHNIQUE SPECIFICATION NO. AWS 1-1 WERE AN APPROVED PROCEDURE, ITS USE WAS INADEQUATE
0510	RV		ABM 7/12/84,28	P	AWS 1-1 FAILED TO CORRECT THE IMPROPER USE OF CODE 7/8, DUE TO THE USE OF UNACCEPTABLE STEEL
0511	RV		ABM 7/12/84,28	E	IMPROPER USE OF INFERIOR STEEL WAS APPROVED BY AN OFFICIAL WHO RECORDS SHOWED WAS SIMULTANEOUS CONSTRUCTION & QA OFFICIAL
0512	RV		ABM 7/12/84,28	E	PG&E CONTRACT REQUIREMENT FOR CHARPY STRENGTH TESTS WAS IMPROPERLY WAIVED FOR CODE 7/8 AND OTHER WELDING PROCEDURES ON PIPE RUPTURE RESTRAINTS
0513	RV-P	DCL-84-328	ABM 10/24/84,28	E	FAILURE TO COMPLY WITH WELD PROCEDURE REQUIREMENTS LED TO "TRULY PATHETIC" WELDS FOR THE PIPE RUPTURE RESTRAINTS
0514	RV		ABM 7/12/84,28	P	PULLMAN IMPROPERLY GRANTED ITSELF A GENERIC EXEMPTION FROM AWS DESIGN, FABRICATION, AND ERECTION REQUIREMENTS FOR ALL STRUCTURAL STEEL PIPE SUPPORT WELDING
0515	RV		ABM 7/12/84,28	P	CODE 88/89 HAS BEEN USED TO WELD STEEL SHAPES AND PLATES IN THE CURRENT DESIGN MODIFICATIONS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0516	RV		ABM 7/12/84,28	P	CODE 88/89 HAS BEEN USED TO WELD PLATES AND SHAPES TO RUPTURE RESTRAINTS WITH 2 WELDING PROCESSES - SMAW & GTAW
0517	RV		ABM 7/12/84,28	E	PG&E IMPROPERLY RESPONDED TO THE MISUSE OF CODE 88/89
0518	RV		ABM 7/12/84,28	P	PG&E IMPROPERLY SUBSTITUTED CODE 92/93 FOR PIPE RUPTURE RESTRAINTS WHEN PROCESS SHEETS SPECIFIED WORK WOULD BE DONE TO CODE 7/8
0519	RV		ABM 7/12/84,28	P	THE SWITCH FROM CODE 7/8 TO CODE 92/93 WAS BASED ON PREMISE THAT BOTH PROCEDURES WERE QUALIFIED TO UNLIMITED THICKNESS AND TECHNICALLY EQUIVALENT
0520	RV		ABM 7/12/84,28	P	PULLMAN WELDERS WORKING UNDER WELDING PROCEDURES THAT ARE NOT QUALIFIED FOR THEIR ASSIGNMENTS
0521	RV-P		ABM 7/12/84,28	E	PULLMAN DID NOT REGULARLY CALIBRATE ITS WELDING MACHINES AND FAILED TO ISSUE EQUIPMENT THAT WOULD CONTROL THE AMPERAGE FOR WELDS
0522	RV-P		ABM 7/12/84,28	E	SINCE 1977 PULLMAN HAS USED GTAW WELDING MACHINES THAT VIOLATE CONTRACT SPECIFICATIONS DUE TO ABSENCE OF ELECTRICAL CURRENT CONTROLS AND AN ON-OFF SWITCH
0523	RV-P		ABM 7/12/84,28	E	THE EFFECT OF THE IMPROPER EQUIPMENT WAS THAT WELDS CONSISTENTLY WERE CONTAMINATED WITH TUNGSTEN
0524	RV-P		ABM 7/12/84,28	E	ALLEGER WAS TOLD NOT TO DISCUSS DEFICIENT GTAW MACHINES WITH PG&E'S NPO WELDING ENGINEER

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0525	RV-P		ABM 7/12/84,28	E	FROM 1969 TO 1983, PULLMAN'S PROCEDURES FOR STORAGE OF CERTAIN WELDING ELECTRODES WERE DEFICIENT
0526	RV-P		ABM 7/12/84,28	E	ALTHOUGH MANAGEMENT OFFICIALS PROMISED TO CORRECT WELD ROD STORAGE VIOLATIONS, CORRECTIVE ACTION WAS INEFFECTIVE
0527	RV-P		ABM 7/12/84,28	E	THE INTEGRITY OF WELD INSPECTIONS IS COMPROMISED BY PROSPECTIVE WELDING INSPECTORS CHEATING ON QUALIFICATION TESTS
0528	RV-P		ABM 7/12/84,28	E	QC MANAGEMENT TOLD INSPECTORS NOT TO PERFORM INSPECTIONS WHEN CONSTRUCTION OBJECTED
0529	RV-P		ABM 7/12/84,28	E	FIVE PULLMAN QA MANAGERS REFUSED A QC INSPECTOR'S REQUEST FOR COPIES OF THE WELDING PROCEDURE FOR WHOSE COMPLIANCE HE WAS RESPONSIBLE
0530	RV-P		ABM 7/12/84,28	E	A QC SUPERVISOR ORDERED ALLEGER TO ACCEPT A FULL PENETRATION WELD WITHOUT BEING ALLOWED TO INSPECT THE BACK OF THE WELD AS WELL AS THE FRONT
0531	RV		ABM 7/12/84,28	E	PROCESS SHEETS THAT GUIDE QUALITY CONTROL COVERAGE DID NOT CONSISTENTLY CALL FOR INSPECTIONS OF FITUP FOR FLARE BEVEL GROOVE WELDS
0532	RV		ABM 7/12/84,28	E	PG&E INFORMALLY EXEMPTED FLARE BEVEL WELDS FROM QC FITUP INSPECTIONS WITHOUT PROPER ENGINEERING REVIEW AND APPROVAL
0533	RV		ABM 7/12/84,28	E	SINCE JULY, 1979 FULL PENETRATION WELDS LESS THAN 9/16 INCH THICK HAVE NOT BEEN ULTRASONICALLY TESTED (UT)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0534	RV		ABM 7/12/84,28	E	PG&E ENGINEERS ACCEPTED THE UT LOOPHOLE WITHOUT THE REQUIRED REVIEW AND WITHOUT REVISING RELEVANT CONTRACT SPECIFICATIONS
0535	RV		ABM 7/12/84,28	E	APRIL 14, 1983 QC DISCREPENCY REPORT (DR) ERRONEOUSLY APPROVED WELDING PROCEDURE CHANGES BY A PRODUCTION FOREMAN IN 1972
0536	RV		ABM 7/12/84,28	E	PULLMAN QC INSPECTORS FAILED TO REJECT WELDS THAT WERE PERFORMED TO THE WRONG PROCESS IN 1972
0537	RV		ABM 7/12/84,28	E	IN THE APRIL 1983 DISCREPENCY REPORT, PULLMAN'S QC PROGRAM STILL FAILED TO RECOGNIZE THE INABILITY OF INSPECTORS (IN 1972) TO NOTICE THE WRONG TYPE OF WELDS
0538	RV-P		ABM 7/12/84,28	E	BECHTEL & PG&E MANAGEMENT MANIPULATED THE UT PROCEDURE TO LOWER THE NUMBER OF REJECTED INDICATIONS IN UT EXAMINATIONS OF FULL PENETRATION WELDS IN 1982
0539	RV		ABM 7/12/84,28	U	PULLMAN'S INTERNAL AUDITOR COULD FIND NO EVIDENCE THAT THE ULTRASONIC THICKNESS MEASUREMENT PROCEDURE FOR REACTOR COOLENT PRESSURE BOUNDARY VALVES WAS QUALIFIED
0540	RV		ABM 7/12/84,28	U	PULLMAN'S AUDITOR COULD FIND NO EVIDENCE OF PROCEDURE VERIFICATION TESTS FOR THE TRANSDUCERS
0541	RV		ABM 7/12/84,28	U	IN 1982 PULLMAN'S INTERNAL AUDITOR COULD FIND NO EVIDENCE THAT MANAGEMENT CONDUCTED THE MEASUREMENTS WITH A

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					QUALIFICATION TEST, DESPITE WARNING IN 1983
0542	RV		ABM 7/12/84,28	P	PULLMAN QA MANAGER REFUSED TO TAKE CORRECTIVE ACTION WHEN THE AUDITOR DISCLOSED THE LACK OF PROCEDURE QUALIFICATION RECORDS OR TESTS FOR ESD'S 236 & 244
0543	RV		ABM 7/12/84,28	P	PULLMAN'S LINGUISTIC DISTINCTION IMPROPERLY EXCLUDES NONDESTRUCTIVE MEASUREMENTS FROM THE SCOPE OF 10CFR50, APPENDIX B, CRITERIA IX, DESPITE THEIR SIGNIFICANCE TO PLANT SAFETY
0544	RV		ABM 7/12/84,28	U	UNSCHEDULED INTERNAL AUDIT (UIA) #34 OF VALVE WALL THICKNESS DATA REPORTS DEMONSTRATED THAT THE DATA REPORTS ARE INCOMPLETE AND NOT TRACEABLE
0545	RV		ABM 7/12/84,28	U	DATA REPORTS OFFERED UNRELIABLE, INCONSISTENT INFORMATION WITH ORIGINAL INFORMATION BEING WHITED-OUT AND ALTERED WITHOUT SIGNATURE OR EXPLANATION
0546	RV		ABM 7/12/84,28	U	NECESSARY RECORDS WERE NOT CONSISTENTLY AVAILABLE TO DEMONSTRATE CALIBRATION OF THE MEASURING EQUIPMENT CAUSING RESULTS SKEWED .6% - 46% OVER AEC MAXIMUM ERROR
0547	RV		ABM 7/12/84,28	U	VALVE MEASUREMENTS FROM EQUIPMENT THAT FAILED MINIMUM RELIABILITY STANDARDS WERE IMPROPERLY USED TO ACCEPT VALVES AS SUFFICIENTLY THICK
0548	RV		ABM 7/12/84,28	U	ALTHOUGH FORTY-TWO DATA REPORTS DISCLOSED THAT VALVES WERE BELOW MINIMUM THICKNESS, THEY WERE MARKED AS "ACCEPTED" WITHOUT EXPLANATION

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0549	RV		ABM 7/12/84,28	U	IN 11 CASES, THE MEASUREMENTS WERE INCOMPLETE, WITH MISSING DATA FOR REQUIRED AREAS OF THE VALVE
0550	RV		ABM 7/12/84,28	U	UIA #34 COULD NOT FIND EVIDENCE THAT ALL REQUIRED VALVES/WELDS WERE EXAMINED AND/OR REPAIRED
0551	RV		ABM 7/12/84,28	U	UIA #34 REPORTED THE LACK OF DOCUMENTATION INDICATING THAT WELD REPAIRS ON THE VALVES WERE NOT CONTROLLED
0552	RV		ABM 7/12/84,28	U	NONE OF THE VALVES MEET AEC AND PG&E DESIGN REQUIREMENTS
0553	RV		ABM 7/12/84,28	U	BECAUSE OF MANAGEMENT'S DECISION NOT TO DEVELOP CORRECTIVE ACTION, THE QUALITY OF THE WELDS MAY BE AS INDETERMINATE NOW AS IN 1972
0554	RV		ABM 7/12/84,28	U	NONDESTRUCTIVE TEST PROCEDURES ALSO LACKED DOCUMENTATION OF PROCEDURE QUALIFICATION RECORDS OR TESTS
0555	RV		ABM 7/12/84,28	U	THE CORRECTIVE ACTION FOR PROCEDURE ESD 234 CONSISTED OF UNRELIABLE, "AFTER THE FACT" PROCEDURE QUALIFICATION TESTS, WHOSE USE WAS NOT CONTROLLED
0556	RV		ABM 7/12/84,28	E	IA #101 DID NOT FIND EVIDENCE THAT MANAGEMENT REVIEWED AND APPROVED THE PROCEDURES FOR THE PQT
0557	RV		ABM 7/12/84,28	E	QA MANAGER, DIRECTED THAT THE PROCEDURE QUALIFICATION RECORDS FOR ESD 210 SHOULD BE USED FOR ESD 270

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0558	RV		ABM 7/12/84,28	E	THERE WAS NO INVESTIGATION THAT IDENTIFIED WHERE ESD 270 WAS USED
0559	RV		ABM 7/12/84,28	E	PULLMAN ESD 241 FOR UT OF VALVE YOKE RODS WAS PERFORMED WITHOUT A VALID PQT
0560	RV		ABM 7/12/84,28	E	ESD 241 WAS USED FOR TESTS FROM DECEMBER 17-20, 1973 BEFORE THE PROCEDURE WAS ISSUED (DECEMBER 26, 1973) OR APPROVED BY PG&E (FEBRUARY 12, 1974)
0561	RV		ABM 7/12/84,28	E	PULLMAN ESD 241 WAS NOT CONSISTENT WITH DRESSER (THE VENDOR'S) INSTRUCTIONS FOR NDE
0562	RV		ABM 7/12/84,28	E	PER PULLMAN INTERNAL AUDIT 101 CONCLUDED THAT TEST DOCUMENTS FAILED TO MEET EITHER ESD 241 OR (DRESSER) VENDOR REQUIREMENTS
0563	RV		ABM 7/12/84,28	E	ESD 241 AND UT TEST DOCUMENTS DID NOT DOCUMENT PG&E REQUIREMENTS FOR BACKUP INSPECTION OF YOKE ROD END CRACKING
0564	RV		ABM 7/12/84,28	E	QA MANAGEMENT DISMISSED ALLEGER'S DISCREPANCY REPORT ON THE BASIS OF FOLLOWING PG&E INSTRUCTIONS
0565	RV		ABM 7/12/84,28	E	NRC REPORTING AND CONTRACT SPECIFICATION VIOLATIONS OCCURRED SINCE ONLY 2 OF 7 DEFICIENT NDE PROCEDURES WERE IDENTIFIED TO PG&E
0566	RV		ABM 7/12/84,28	E	Q. A. MANAGER PREVENTED THE INTERNAL AUDITOR FROM RESEARCHING THE USE OF ESD 246, ALTHOUGH ESD 247 WAS TRACED TO CRACKED WELDS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0567	RV		ABM 7/12/84,28	E	PROCEDURES ESD 246 & 247 QUALIFIED AFTER-THE-FACT WITH DIFFERENT EQUIPMENT THAN THAT ORIGINALLY USED
0568	RV		ABM 7/12/84,28	P	PULLMAN INTERNAL AUDIT #101 WAS DELIBERATELY LEFT OPEN FOR OVER ONE YEAR BY THE SITE QA MANAGER
0569	RV		ABM 7/12/84,28	P	PULLMAN CORPORATE QA DIRECTOR REFUSED TO ADDRESS INTERNAL AUDIT 31 WHICH RAISED THE ISSUE OF EXCESSIVE TIME TO RESOLVE IA101
0570	OI		ABM 7/26/85, 33	P	SENSITIVE
0571	RV-P	DCL-84-328	ABM 10/24/84,28	P	WHEN INFORMED OF NON-COMPLIANCE WITH 10CFR50 APP. B, Q.A. MANAGER STATED THAT PULLMAN WAS NOT COMMITTED TO APPENDIX B
0572	RV-P	DCL-84-123	85-35,33	E	PG&E HAS STIFLED PULLMAN INSPECTOR'S REPORTS OF FAULTY BOSTROM-BERGEN AND AMERICAN BRIDGE WELDS, BY DIRECTING THEM NOT TO ISSUE DR'S
0573	RV-P		ABM 7/12/84,28	E	SHOP WELDS AND HARDWARE OF BOSTROM-BERGEN AND AMERICAN BRIDGE WERE OBVIOUSLY DEFECTIVE
0574	RV-P		ABM 7/12/84,28	P	IN 1982 PG&E IMPROPERLY DIRECTED PULLMAN NOT TO INSPECT THESE WELDS DURING THE WALKDOWN PROGRAM
0575	RV		ABM 7/12/84,28	U	NO MATERIAL TRACEABILITY FOR IN-CORE THERMOCOUPLES (FOLEY)
0576	RV		ABM 7/12/84,28	U	IN-CORE THERMOCOUPLES MISCLASSIFIED BY FOLEY

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0577	RV		ABM 7/12/84,28	E	SHIMS TO LEVEL PIPE SUPPORT BASE PLATES UNDOCUMENTED
0578	RV		ABM 7/12/84,28	E	UNDOCUMENTED ADDITION OF SHIMS UNDERMINES SEISMIC CALCULATIONS
0579	RV-P		ABM 7/12/84,28	P	QC TRAINING INADEQUATE
0580	RV-P		ABM 7/12/84,28	E	QC INSPECTOR QUALIFICATIONS INDETERMINATE
0581	RV		ABM 7/12/84,28	E	QA MANAGEMENT ROUTINELY CHANGED ACCEPTANCE CRITERIA
0582	RV		ABM 7/12/84,28	P	PROMPT VIOLATION DISCLOSURE TO NRC IS NOT POSSIBLE
0583	RV		ABM 7/12/84,28	P	QC INSPECTORS NOT TRAINED TO REPORT VIOLATIONS
0584	RV		ABM 7/12/84,28	P	PG&E CONSTRUCTION PERSONNEL CANNOT REPORT VIOLATIONS
0585	RV-P		ABM 7/12/84,28	E	LOCKERT COULD NOT RESEARCH PROFESSIONAL STANDARDS
0586	RV-P		ABM 7/12/84,28	E	LOCKERT DISMISSED FOR BEING OUT OF HIS INSPECTION AREA
0587	RV		ABM 7/12/84,28	E	INSPECTORS VICTIMIZED BY CONSTRUCTION WORKERS
0588	OI		ABM 7/26/85, 33	P	SENSITIVE - 0120
0589	OI		ADM 2/12/86,33	P	SENSITIVE - 0130
0590	OI		ABM 2/12/86,33	E	SENSITIVE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0591	OI		ABM 3/13/86,33	P	SENSITIVE
0592	OI		ABM 12/16/85, 33	P	SENSITIVE
0593	RV		ABM 7/12/84,28	P	PULLMAN QA MANAGEMENT HAS A PHILOSOPHY OF SCHEDULING IS A HIGHER PRIORITY THAN QUALITY
0594	RV		ABM 7/12/84,28	P	PULLMAN DEMONSTRATED ANTI-QA PHILOSOPHY BY CIRCUMVENTING PG&E QA PARTICIPATION IN PULLMAN QA PROGRAM ISSUES
0595	RV		ABM 7/12/84,28	P	PG&E QA/QC WAS NOT ANY BETTER THAN PULLMAN'S
0596	NRR		28	E	ENGINEERS IN THE SEISMIC DESIGN REVIEW PROGRAM ONLY RECEIVED MINIMAL TRAINING
0597	NRR	DCL-84-046/84-123	33	D	MANAGEMENT FAILED TO ISSUE CONTROLLED DOCUMENTS FOR ENGINEERS TO USE IN SAMPLE CALCULATIONS
0598	NRR		26	D	ENGINEERS DID NOT WORK WITH CONTROLLED DOCUMENTS UNTIL AUGUST 1983 (SEE SSER 26, PG E-5)
0599	OI			P	SENSITIVE
0600	NRR	DCL-84-123	26	D	ENGINEERING CALCULATIONS THAT FAILED PIPE SUPPORTS WERE DESTROYED (SEE SSER 26, PG E-5)
0601	NRR	DCL-84-123	26	D	MANAGEMENT STATED CALCULATIONS WERE BECHTEL PROPERTY AND BECHTEL COULD DESTROY THEM IF THEY WANTED (SEE SSER 26, PG E-5)
0602	NRR	DCL-84-123	26	D	NEW ENGINEERS ASSIGNED TO CONDUCT ROUTINE REVIEWS FOR ACCURACY OF PREVIOUS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WORK PERFORMED--COMPLETE REANALYSIS OF FAILED SUPPORTS (SEE SSER 26, PG E-5)
0603	NRR	DCL-84-123	26	D	HARDWARE WAS REDEFINED THEREBY RECLASSIFYING A DESIGN FLAW AS AN ADDITIONAL FACTOR OF SAFETY (SEE SSER 26, PG E-5)
0604	NRR	DCL-84-123	26	D	UNDOCUMENTED PIPE SUPPORTS WERE CONSTRUCTED NEAR PREVIOUSLY FAILING SUPPORTS TO REDO THE CALCULATIONS AND PASS THE SUPPORT (SEE SSER 26, PG E-5)
0605	RV		ABM 7/12/84,28	E	THE DESIGN DRAWINGS INACCURATELY REPRESENTED THE NATURE OF FLARE BEVEL WELDS, WHICH MISLEAD QA INSPECTORS
0606	RV		ABM 7/12/84,28	E	FLARE BEVEL WELDS DID NOT ACHIEVE FULL PENETRATION
0607	RV		ABM 7/12/84,28	E	FAILURE TO VERIFY THE PROPER LOCATION OF HILTI-BOLTS
0608	NRR	DCL-84-123	33	R	DESIGN DRAWING EXAGGERATED THE LOAD RATINGS OF U-BOLTS UP TO FOUR TIMES THEIR RATING
0609	NRR	DCL-84-123	26	R	ANGLE MEMBERS (PIPE SUPPORTS) WERE UP TO FOUR TIMES TOO LONG FOR ALLOWABLE BENDING STRESS (SEE SSER 26, PG E-5)
0610	NRR	DCL-84-123	26	E	RHR HOT LEG SUCTION VALVES ARE PRONE TO CLOSURES (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0611	NRR	DCL-84-123	26	E	PG&E AND NRC RATIONALIZATION FOR THE RHR VALVES MISREPRESENTS THE PLANT'S CIRCUITRY (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0612	NRR	DCL-84-123	26	E	PG&E AND NRC MISREPRESENTS THE CIRCUITRY BY CLAIMING RHR PROTECTION THROUGH RELIANCE ON CERTAIN ACTUATORS (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0613	RV-P		ABM 7/12/84,28	U	ALLEGER REPRIMANDED FOR DISCLOSING THE POTENTIAL FOR RHR PUMP FAILURE
0614	RV		ABM 7/12/84,28	U	PG&E FAILED TO NOTIFY NRC OF RHR DESIGN DEFECT
0615	RV		ABM 7/12/84,28	U	PG&E REJECTED ALLEGER'S CHALLENGE OF RHR DESIGN
0616	NRR	DCL-84-123	26	E	RHR CORRECTIVE ACTION WAS FOR OPERATORS TO LEAVE THE CONTROL ROOM TO MANUALLY OPERATE VALVE BREAKERS TO PROTECT RHR PUMPS (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0617	RV		ABM 7/12/84,28	U	MANAGEMENT DID NOT SPECIFY AND FOLLOW-UP ACTION TO PREVENT RECURRENCE OF RHR PROBLEM
0618	RV		ABM 7/12/84,28	U	NRC APPROVAL WAS NOT OBTAINED FOR RHR CORRECTIVE ACTION OF MANUAL OPERATOR RESPONSE
0619	NRR	DCL-84-123	26	E	NO CONTROL FROM ANNUNCIATOR TO ALERT THE OPERATOR WHEN THE RHR PUMPS ARE IN DANGER (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0620	RV		ABM 7/12/84,28	U	ALLEGER DID NOT RECEIVE ANY RESPONSE TO QA VIOLATIONS HE REPORTED ON 1981 SPURIOUS VALVE CLOSURE
0621	NRR	DCL-84-123	26	R	IT IS IMPOSSIBLE TO DETERMINE THAT REMOVING THE SSPS OUTPUT FUSES WILL CAUSE VALVES 8701 & 8702 TO AUTO CLOSE (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0622	RV		ABM 7/12/84,28	U	PG&E FAILED TO MAKE THE OFFICIAL DRAWINGS ACCURATE BY DISCLOSING CIRCUIT CONNECTIONS RESPONSIBLE FOR SPURIOUS CLOSINGS
0623	NRR	DCL-84-123	26	E	PG&E AND NRC HAVE ERRONEOUSLY CLAIMED THAT THE POSSIBILITY OF SPURIOUS VALVE CLOSURES IS ONLY SIX IN TEN MILLION (SEE ALLEGATIONS 39 AND 45 AND SSER 26, PG E-10)
0624	RV-C		85-27, 33	U	PG&E OFFICIALS FAILED TO CORRECT A FALSE STATEMENT TO NRC THAT THE COMPANY WAS IGNORANT OF INACCURACIES IN ITS PLANT MANUAL FOR OPERATORS
0625	RV		ABM 7/12/84,28	U	PULLMAN DOES NOT COMPLY WITH AWS SYMBOL CONVENTION FOR WELD GRINDING
0626	RV		ABM 7/12/84,28	E	PG&E ACCEPTED AN OUT-OF-CODE PRACTICE OF A FILLET WELD
0627	RV		ABM 7/12/84,28	E	PULLMAN INSPECTOR CANNOT CORRECT WELD SYMBOL DEFICIENCIES ON PREVIOUSLY ACCEPTED WORK ONLY PG&E HAS THAT AUTHORITY

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0628	RV		ABM 7/12/84,28	E	FAILED TO IMPLEMENT AWS SYMBOLOGY RESULTED IN UNDERSIZED WELDS ON CONTAINMENT LINER STUD WELDING
0629	RV		ABM 7/12/84,28	P	COPPER CHILL BARS WERE USED INSTEAD OF BACKING STRIPS - A PRACTICE NOT ALLOWED BY WPS
0630	RV		ABM 7/12/84,28	P	PULLMAN TOOK NO CORRECTIVE ACTION TO THE PROBLEM IDENTIFIED ABOVE
0631	OI		ABM 7/26/85, 33	P	SENSITIVE
0632	OI		ABM 7/26/85, 33	P	SENSITIVE
0633	RV		ABM 7/12/84,28	U	PG&E BORROWED THREE CLASS ONE STEEL PLATES FROM PULLMAN TO COVER A TRENCH
0634	RV		ABM 7/12/84,28	U	PULLMAN QC MANAGER CONVINCED INSPECTOR TO ACCEPT THE ABOVE PLATES
0635	RV-P	DCL-84-328	ABM 10/24/84,28	U	PULLMAN QC MANAGER NEVER RESPONDED TO AN INSPECTOR'S MEMO ABOUT A POTENTIALLY WIDESPREAD PROBLEM WITH BASEPLATES MOUNTED OVER CONCRETE WITH VOIDS
0636	RV		ABM 7/12/84,28	U	PULLMAN QC MANAGER CENSORED DR TO REMOVE ALL REFERENCES TO TWO OF THE THREE UNQUALIFIED MATERIALS USED
0637	RV-P		ABM 7/12/84,28	E	HOLDS DRILLED BY BOSTROM-BERGEN AND AMERICAN BRIDGE DID NOT MATCH THE DESIGN DRAWING.PULLMAN QC INSPECTORS CONCERN WAS REBUKED
0638	NRR	DCL-85-058/064	26	E	FAULTY QC FOR PAINT AND OTHER PROTECTIVE COVERING (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0639	NRR	DCL-85-058/064	26	E	ADDITIONAL ADVERSE IMPACT OF FAULTY QUALITY CONTROLLED PAINT JOB (SEE ABOVE)(SEE SSER 26, PG E-5)
0640	NRR	DCL-85-058/064	26	E	PG&E HAD NO QC PROGRAM FOR PAINT JOB BEFORE 12/83 (SEE SSER 26, PG E-5)
0641	NRR	DCL-85-058/064	26	E	PLANT SPEC USED BY PAINT FOREMAN DID NOT CONFORM TO THAT OF THE RECORDS DEPARTMENT (SEE SSER 26, PG E-5)
0642	NRR	DCL-85-058/064	26	E	CORRECTIVE ACTION FOR QC PAINT VIOLATIONS HAD BEEN PROSPECTIVE ONLY (SEE SSER 26, PG E-5)
0643	NRR	DCL-85-058/064	26	E	QUALITY OF AN UNKNOWN PERCENTAGE OF PAINT AND OTHER PROTECTIVE COATINGS IS INDETERMINATE (SEE SSER 26, PG E-5)
0644	NRR	DCL-85-058/064	26	E	NO EVIDENCE OF ANY EFFORTS BY PG&E TO ASSESS SAFETY SIGNIFICANCE OF THE NON-EXISTENCE OF ANY QUALITY CONTROL FOR PAINT (SEE SSER 26, PG E-5)
0645	NRR	DCL-85-058/064	26	E	PAINT INSPECTORS HAVE NOT BEEN INSTRUCTED THAT THEY CAN WRITE A NON-CONFORMANCE REPORT (NCR) (SEE SSER 26, PG E-5)
0646	RV		ABM 7/12/84,28	E	BECAUSE OF DEFICIENT DESIGN DRAWINGS FOR WELDING, THE VARIOUS DEPARTMENTS MADE DRASTICALLY INCONSISTENT ASSUMPTIONS ABOUT WELD PENETRATION
0647	RV		ABM 7/12/84,28	E	ASSUMPTIONS USED BY THE SAN FRANCISCO OFFICE TO DESIGN BEVEL AND FLARE BEVEL WELDS FOR TUBE STEEL WERE INACCURATE AND COMPROMISE CLAIMS THAT THE DESIGN IS CONSERVATIVE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0648	RV		ABM 7/12/84,28	E	WELD PROCEDURES AND TECHNIQUES FAILED TO COMPENSATE FOR INACCURATE DESIGN DRAWINGS
0649	RV		ABM 7/12/84,28	E	ESD-223 DID NOT REQUIRE JOINTS FOR BEVEL AND FLARE BEVEL WELDS TO BE FLUSH
0650	RV		ABM 7/12/84,28	E	INDIVIDUAL AND OTHER WITNESSES HAVE OBSERVED BEVEL AND FLARE BEVEL WELDS THAT WERE NOT FLUSH
0651	RV		ABM 7/12/84,28	E	THE ANGLES SPECIFIED IN PULLMAN WELD PROCEDURES AND TECHNIQUES DID NOT MATCH THE RELEVANT CODE REQUIREMENTS IN DESIGN COMMITMENTS
0652	RV		ABM 7/12/84,28	E	QC INSPECTORS DID NOT RECEIVE CALIBRATED TOOLS TO MEASURE THE VISIBLE RADII OF BEVEL & FLARE BEVEL WELDS ON AN AS-BUILT BASIS
0653	RV		ABM 7/12/84,28	E	THE CURRENT QC CORRECTIVE ACTION PROGRAM FOR WELD DESIGN DEFICIENCIES DOES NOT COMPENSATE FOR PAST MISTAKES
0654	RV		ABM 7/12/84,28	E	AS OF INDIVIDUAL'S DEPARTURE, CORRECTIVE ACTION WAS INADEQAUTE FOR INACCURATE DESIGN DRAWINGS ON BEVEL AND FLARE BEVEL WELDS
0655	RV		ABM 7/12/84,28	E	QC INSPECTORS COULD NOT READ SYMBOLS AND INSTRUCTIONS ON THE DESIGN DRAWINGS BECAUSE THEY WERE NOT CONSISTENTLY QUALIFIED TO THE AWS CODE AND NOT ISSUED THE SYMBOLS CODE
0656	RV		ABM 7/12/84,28	E	UNTIL FEBRUARY, 1984, NEITHER THE DESIGN ENGINEERS, CONSTRUCTION NOR THE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CONTRACTOR USED A UNIFORM SYSTEM OF WELD SYMBOLS
0657	RV		ABM 7/12/84,28	E	IN SOME CASES, THERE WAS NO DESIGN GUIDANCE FOR WELDING IN THE FIELD DUE TO THE LACK OF SYMBOLS FOR WELDING REQUIRED BY THE DRAWINGS
0658	RV		ABM 7/12/84,28	E	INCONSISTENT INTERPRETATION OF WELD SYMBOLS IN PART WAS DUE TO RELIANCE ON AN ORAL TRADITION, INSTEAD OF DOCUMENTED INSTRUCTIONS
0659	RV		ABM 7/12/84,28	E	THE STANDARD OPERATION ON-SITE WAS TO ASSUME THAT SAFETY-RELATED WELDING WAS DONE PROPERLY, EVEN WHEN SYMBOLS DID NOT PROVIDE CORRECT INSTRUCTION
0660	RV		ABM 7/12/84,28	E	THE WELD SYMBOL BREAKDOWN RESULTED IN OVERSIZED WELDS THAT CAN ALSO COMPROMISE SAFETY
0661	RV		ABM 7/12/84,28	E	ANOTHER EFFECT OF WELD SYMBOL BREAKDOWN ARE DRAWINGS THAT MAKE IMPOSSIBLE CLAIMS ABOUT WELDS, MEANING AS-BUILT CONDITION IS INDETERMINATE
0662	RV		ABM 7/12/84,28	E	PG&E MANAGEMENT'S RESPONSE TO FIELD ENGINEERS INITIATIVES TO CORRECT WELD SYMBOL DEFICIENCIES INCLUDED DEMOTION, TRANSFERS, AND ORDERS TO STOP
0663	RV		ABM 7/12/84,28	E	IN 1983, MANAGEMENT FAILED TO PROCESS IN WRITING MINOR VARIATION REPORTS (MVR) ON WELDING
0664	RV		ABM 7/12/84,28	E	1983 PG&E REFORM COMMITMENTS ON WELD SYMBOLS WERE INACCURATE IN FACT, AND

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					DEMONSTRATED A LACK OF UNDERSTANDING ABOUT THE PROBLEM
0665	NRR	DCL-84-328	28	E	PG&E'S REFORM COMMITMENTS HAVE NOT BEEN APPLIED TO THE FIELD THROUGH AN ON-SITE TRAINING PROGRAM FOR THE ENGINEERS
0666	RV		ABM 7/12/84,28	E	PG&E DID NOT SPECIFY WHEN PREHEATING WAS REQUIRED FOR WELDING
0667	RV		ABM 10/24/84,28	E	IN 1983 PG&E MANAGEMENT CORRECTED EXAMPLES OF A GENERIC DEFICIENCY BUT REFUSED TO RECOGNIZE THE REPORT ON THE BASIC PROBLEM
0668	RV		ABM 10/10/84,28	E	PG&E MANAGEMENT'S RATIONALIZATION TO THE NRC STAFF, THAT DEFECTIVE WELDS ARE UNNECESSARY, HAS UNTENABLE GENERIC IMPLICATIONS
0669	RV		ABM 10/24/84,28	E	CERTAIN "UNNECESSARY" WELDS ARE VITAL TO THE SAFETY OF PLANT EQUIPMENT
0670	RV		ABM 7/12/84,28	E	A CURRENT ENGINEER AT DIABLO CANYON CHARACTERIZED PG&E'S FEBRUARY 7 RESPONSE (DCL-80-040) TO A JANUARY 19 NRC AUDIT EXIT INTERVIEW AS BEING FALSE
0671	RV		ABM 7/12/84,28	E	IN ITS FEBRUARY 7 RESPONSE TO THE NRC STAFF, PG&E SUBMITTED KNOWLINGLY FALSE STATEMENTS ON WELD SYMBOLS
0672	RV		ABM 7/12/84,28	E	ON FEBRUARY 21, FIELD ENGINEERS RECEIVED A PG&E MANAGEMENT MEMORANDUM, THAT PREINSPECTORS COULD CHANGE WELD SYMBOLS TO ASSURE COMPLIANCE WITH AWS A 2.4

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0673	RV		ABM 7/12/84,28	E	EFFECTIVE CORRECTIVE ACTION TO VERIFY THE SIZE OF SKEWED FILLET AND GROOVE WELDS HAS NOT BEEN IMPLEMENTED
0674	NRR	DCL-84-166	26	D	QUALITY OF REVIEW PROCESS QUESTIONABLE BECAUSE ASSUMPTION SHEETS NOT INCLUDED IN FINAL CALCULATIONS IN SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
0675	NRR	DCL-84-166	33	D	PG&E RESPONSE TO NRC ON SMALL BORE PIPING ANALYSIS DOES NOT CONTAIN ENOUGH INFORMATION TO SUPPORT A CONCLUSION
0676	NRR		26/33	R	CONCLUSIONS OF PG&E IN JANUARY 27, 1984 RESPONSE TO NRC ON EXPANSION ANCHORS ARE BASED ON INCOMPLETE, INCONSISTENT DATA (SEE SSER 26, PG E-10)
0677	NRR	DCL-84-166	26	D	ESSENTIAL INFORMATION FOR REVIEW CALCULATIONS FOR DESIGN VERIFICATION WAS REMOVED FROM DRAWINGS (SEE SSER 26, PG E-5)
0678	NRR	DCL-84-166	26	D	SEISMIC DESIGN REVIEW MAY HAVE FAILED TO COMPENSATE FOR THE EFFECTS OF THE WELD SYMBOL BREAKDOWN (SEE SSER 26, PG E-5)
0679	NRR	DCL-84-166	26	D	AT TIME OF STOKES' DEPARTURE, OPERATORS DID NOT HAVE ACCESS TO CENTRAL DOCUMENT CENTER WITH INFORMATION NECESSARY TO RESPOND TO PLANT CONDITIONS (SEE SSER 26, PG E-5)
0680	RV		ABM 7/12/84,28	E	WELD PROCEDURES AND TECHNIQUES FAILED TO COMPENSATE FOR DRAWING WEAKNESS
0681	RV		ABM 7/12/84,28	E	ESD 223 DID NOT REQUIRE JOINTS TO BE WELDED FLUSH FOR FLARE AND BEVEL

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0682	RV		ABM 7/12/84,28	E	SPECIFIED WELD ANGLES DID NOT MATCH RELEVANT CODE REQUIREMENTS IN DESIGN COMMITMENTS
0683	RV		ABM 7/12/84,28	E	ESD 223 INCLUDED INACCURATE INFORMATION IN THE SKEWED FILLET WELD TABLE
0684	RV		ABM 7/12/84,28	E	MANAGEMENT FAILED TO PROVIDE QC CALIBRATED TOOLS TO MEASURE VISIBLE RAD II OF FLARE WELDS
0685	RV		ABM 7/12/84,28	E	NRC MAY NOT ACCEPT A CORRECTIVE ACTION PROGRAM
0686	RV		ABM 7/12/84,28	E	CORRECTIVE ACTION HAS BEEN INADEQUATE TO DATE ON BEVEL AND FLARE BEVEL WELDS
0687	RV		ABM 7/12/84,28	E	CORRECTIVE ACTION FOR SKEWED FILLET AND GROOVE WELDS REMAINS INADEQUATE
0688	RV	DCL-84-243	ABM 7/12/84,28	P	UNTIL 1982, PULLMAN'S PROGRAM FOR PIPE SUPPORTS AND PIPE RUPTURE RESTRAINTS DID NOT COMPLY WITH 10CFR50,APPENDIX B
0689	RV	DCL-84-243	ABM 7/12/84,28	P	A NOVEMBER 3, 1978 PROGRAM DESCRIPTION DID NOT MAKE ANY REFERENCES TO 10CFR50 IN THE CHARTS AND ATTACHMENTS FOR PIPE SUPPORTS AND PIPE RUPTURE RESTRAINTS
0690	RV	DCL-84-243	83-37,28	P	IN 83-37 NRC ACCEPTED PG&E AND PULLMAN'S POSITION THAT NDE PERSONNEL HAVE MET THE ANSI REQUIREMENTS-THAT IS FALSE
0691	RV	DCL-84-243	ABM 7/12/84,28	E	PULLMAN DID NOT MEET ANSI REQUIREMENTS BECAUSE IT WAS NOT WILLING TO PAY FOR EXPERIENCED PERSONNEL

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0692	RV	DCL-84-243	83-37,28	P	IN 83-37 NRC AGREED THAT PULLMAN AND PG&E HAVE ADEQUATE RECORDS FOR WELDER AND NDE CERTIFICATION-THAT IS FALSE
0693	RV	DCL-84-243	ABM 7/12/84,28	E	VOID IN THE 90 DAY WELD LOG FROM AUGUST 1972 TO DECEMBER 1972
0694	RV	DCL-84-243	ABM 7/12/84,28	U	PG&E DID NOT RESPOND TO INDIVIDUAL'S SATISFACTION ON HIS REPORT ON MINIMUM VALVE WALL THICKNESS.THE REPORT IS INCOMPLETE AND INTERNALLY CONTRADICTORY
0695	RV	DCL-84-243	ABM 7/12/84,28	U	PG&E'S RESPONSE ON VALVE THICKNESS TEST EQUIPMENT NOT SATISFACTORY
0696	RV	DCL-84-243	ABM 7/12/84,28	E	PG&E RESPONSES TO WELDING ALLEGATIONS DOES NOT DEMONSTRATE THAT PROCEDURES USED WERE THE SAME AS THOSE SPECIFIED BY CODE 7/8
0697	RV-P	DCL-84-243	ABM 7/12/84,28	P	PULLMAN DID NOT MEET THE ANSI N45.2.6 PARA 3.1.2 EDUCTIONAL AND EXPERIENCE REQUIREMENTS FOR LEVEL II INSPECTORS
0698	RV-P	DCL-84-243	ABM 7/12/84,28	P	NEITHER PG&E OR PULLMAN TOLD THE PULLMAN INSPECTOR THAT HE WAS CERTIFIED TO AND RESPONSIBLE FOR ANSI N45.2.6 LEVEL II CAPABILITIES
0699	RV		ABM 7/12/84,28	E	ASTM A-325 BOLTS WERE NEVER INTENDED FOR WELDED APPLICATION AS MECHANICAL FASTENERS
0700	RV		ABM 7/12/84,28	E	PULLMAN HAD NO BUSINESS ATTEMPTING TO WELD A-325 BOLTS WITH A WELDING PROCEDURE THAT WAS RESTRICTED TO P1 MATERIALS BY ASME CODE ASTM A-325 IS NOT A P1 MATERIAL

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0701	RV	DCL-84-243	ABM 7/12/84,28	U	WELDING ON WATER-FILLED CCW PIPES (REBUKE PG&E RESPONSE)
0702	RV	DCL-84-243	ABM 7/12/84,28	P	PULLMAN DID NOT PROPERLY ACCEPT PROBLEM REPORTS (REBUKE PG&E RESPONSE)
0703	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E'S RESPONSE)
0704	RV	DCL-84-243	ABM 10/24/84,28	E	WELD REQUIREMENT MISINTERPRETATION (REBUKE PREVIOUS PG&E'S RESPONSE)
0705	RV	DCL-84-243	ABM 10/24/84,28	E	PG&E CLAIMS IT'S PROGRAM IS TYPICAL FOR THE INDUSTRY (REBUKE PREVIOUS PG&E'S RESPONSE)
0706	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E'S RESPONSE)
0707	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E'S RESPONSE)
0708	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E'S RESPONSE)
0709	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E'S RESPONSE)
0710	RV	DCL-84-243	ABM 10/24/84,28	E	SAFETY SIGNIFICANCE OF WELD SYMBOLOGY (REBUKE PREVIOUS PG&E'S RESPONSE)
0711	RV	DCL-84-243	ABM 10/24/84,28	E	LACK OF COMMUNICATION BETWEEN ENGINEERING AND CONSTRUCTION ON WELD SYMBOL (REBUKE PREVIOUS PG&E'S RESPONSE)
0712	RV	DCL-84-243	ABM 10/24/84,28	E	LACK OF COMMUNICATION BETWEEN ENGINEERING AND CONSTRUCTION ON WELD SYMBOL (REBUKE PREVIOUS PG&E'S RESPONSE)

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0713	RV	DCL-84-243	ABM 10/24/84,28	E	LACK OF RESERVE MARGIN IN WELD DESIGN (REBUKE PREVIOUS PG&E'S RESPONSE)
0714	PV	DCL-84-243	ABM 10/24/84,28	E	QUESTIONABLE WELDS WERE ACCEPTED BY CALCULATION INSTEAD OF REPAIRED (REBUKE PREVIOUS PG&E RESPONSE)
0715	RV-P	DCL-84-343	ABM 12/17/84,28	E	PRE-1981 "AS-BUILT" REVIEW WERE PERFORMED WITHOUT SPECIFICATIONS (REBUKE PEVIOUS PG&E RESPONSE)
0716	NRR	DCL-84-243	26	R	"OVER-WELDING" WAS NOT ADDRESSED (REBUKE PREVIOUS PG&E RESPONSE) (SEE SSER 26, PG E-5)
0717	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E RESPONSE)
0718	RV-R	DCL-84-243	85-01,33	E	WELD SYMBOLOGY ISSUE - CLARIFICATION DOCUMENT WAS NOT DISTRIBUTED (REBUKE PREVIOUS PG&E RESPONSE)
0719	RV	DCL-84-243	84-36,28	E	PG&E DID NOT CONDUCT COMPREHENSIVE SESSIONS TO CLARIFY WELD SYMBOL AS CLAIMED (REBUKE PREVIOUS PG&E RESPONSE)
0720	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E RESPONSE)
0721	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E RESPONSE)
0722	RV	DCL-84-243	ABM 10/24/84,28	E	WELD SYMBOLOGY ISSUE (REBUKE PREVIOUS PG&E RESPONSE)
0723	RV	DCL-84-243	ABM 10/24/84,28	E	THE ASSUMED STRENGTH OF THE WELD JOINT IS NOT CONSERVATIVE AS PG&E CLAIMED (REBUKE PREVIOUS PG&E RESPONSE)

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0724	RV		ABM 7/12/84,28	P	PULLMAN FAILED TO TRACK ESSENTIAL VARIABLES IN THE APPLICATION OF WELD PROCEDURE SPECIFICATION 7/8
0725	RV		ABM 7/12/84,28	E	PG&E ADMITTED WELDING OF A-325 BOLTS IS AN "INAPPROPRIATE SPECIFICATION AND APPLICATION" BUT INTENDS TO ACCEPT WORK THAT IS SUBSTANDARD
0726	RV	DCL-84-243	ABM 7/12/84,28	U	CONTAINMENT DOOR UNSAFE, AND DOES NOT OPERATE PROPERLY
0727	RV	DCL-84-243	ABM 7/12/84,28	U	CONTAINMENT DOOR SHEAR HINGES WORN OUT
0728	RV	DCL-84-243	ABM 7/12/84,28	U	NO NRC RESPONSE TO CONTAINMENT DOOR ACCIDENT
0729	RV	DCL-84-243	ABM 7/12/84,28	U	WELDING ON WATER-FILLED CCW PIPES (REBUKE PG&E RESPONSE)
0730	RV	DCL-84-243	ABM 7/12/84,28	E	WELDING OF A-325 BOLTS
0731	OI		ABM 9/25/85, 33	P	SENSITIVE
0732	RV	DCL-84-243	ABM 10/24/84,28	U	NRC NOT EFFECTIVE IN THE OVERSIGNT OF THE CONSTRUCTION PROCESS
0733	NRR	DCL-84-243	26	D	IMPROPER GAPS TO REDUCE THERMAL LOADS (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0734	NRR	DCL-84-243	26	R	USE OF DIFFERENT STIFFNESSES FOR THE SAME RIGID SUPPORT IN STATIC AND DYNAMIC PIPE ANALYSIS (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0735	NRR	DCL-84-243	26	D	COMPUTATION ERROR AND MODELING DEFICIENCIES (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0736	NRR	DCL-84-243	26	R	SNUBBERS LOCATED ADJACENT TO RIGID RESTRAINTS BEING INOPERATIVE (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0737	NRR	DCL-84-243	26	D	IMPROPER RESOLUTION OF PIPE INTERFERENCE (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0738	NRR	DCL-84-243	26	D	CALCULATION OF THE LOAD-CARRYING CAPACITY OF SMALL BORE PIPING SUPPORT (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0739	NRR	DCL-84-243	26	R	JOINT RELEASE ASSUMPTION FOR RIGID CONNECTION (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0740	NRR	DCL-84-243	26	R	U-BOLT ALLOWABLES (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0741	NRR	DCL-84-243	26	R	ANGLE-SHAPED STRUCTURAL MEMBERS (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0742	NRR	DCL-84-243	26	D	SAMPLE SIZE TO A SMALL FOR REVERIFICATION (REBUKE PG&E'S RESPONSE) (SEE SSER 26, PG E-5)
0743	RV-P		ABM 7/12/84,28	E	FOLEY WELDERS WERE CERTIFIED BY UNQUALIFIED QC INSPECTORS
0744	RV		ABM 10/24/84,28	E	CRACKING WELDS IN THE FUEL HANDLING BUILDING
0745	RV		84-20,28	E	INCORRECT WELD PROCEDURE AND FITUP NOTED JOINT WAS WELDED UP WITHOUT CORRECTING FITUP PROBLEM
0746	RV-P		ABM 7/12/84,28	E	QC INSPECTORS NOT INSTRUCTED AS HOW TO FILL OUT NONCONFORMANCE REPORTS

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0747	RV-P		ABM 7/12/84,28	E	SUPERVISOR DISCOURAGED USING RED TAGS TO IDENTIFY NONCONFORMING ITEMS BECAUSE IT DELAYED PRODUCTION
0748	RV		ABM 10/10/84,28	E	QC INSPECTORS DISCOURAGED FROM INSPECTING ANOTHER INSPECTORS WORK, ESPECIALLY DAYSHIFT VS NIGHTSHIFT INSPECTIONS
0749	RV		ABM 7/12/84,28	U	UNDERCUT ON STAINLESS STEEL REACTOR COOLANT PIPING
0750	RV		ABM 7/12/84,28	U	STRUCTURAL PIECE INSTALLED AT THE WRONG LOCATION. DOCUMENTATION STATES THAT PIECE IS INSTALLED ELSEWHERE
0751	RV-P		ABM 7/12/84,28	P	SENIOR INSPECTOR, A LEVEL II, DID NOT VISUALLY INSPECT LEVEL I WORK BEFORE CONSIGNING REPORT. THIS IS FALSIFICAION OF RECORDS
0752	RV-P		ABM 7/12/84,28	P	UNQUALIFIED WELD INSPECTORS
0753	RV-P	DCL-84-343	ABM 12/17/84,28	E	AWS INSPECTOR STAMPS ISSUED TO NON-LEVEL II INSPECTORS, I.E. TO LEVEL I INSPECTORS
0754	NRR		26/28	E	BOLT HOLES IN STRUCTURAL STEEL COMPONENTS HAVE BEEN OBSERVED TO BE MIS-SHAPENED (SEE SSER 26, PG E-10 AND ALLEGATION 351 IN SSER 28)
0755	NRR		26/28	E	BOLT HOLES IN STRUCTURAL STEEL COMPONENTS HAVE BEEN PACKED WITH WIRE OF DIFFERENT LENGTHS (SEE SSER 26, PG E-10)
0756	NRR		26/28	R	ANCHOR BOLTS HAVE BEEN FOUND TO BE PULLED OUT OF THE WALL (SEE SSER 26, PG E-10)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0757	OI		ABM 12/6/85,33	P	SENSITIVE
0758	RV-P	DCL-84-343	ABM 12/17/84,28	U	HANGER #24-20R--WELDS ON LUG ATTACHMENTS ARE NOT AS SPECIFIED
0759	RV-P	DCL-84-328	ABM 10/24/84,28	P	ATKINSON QC WAS NON-EXISTENT AT START, IT WAS SOMETHING THAT JUST SORT OF DEVELOPED
0760	RV		ABM 10/24/84,28	E	ATTITUDE OF QA MANAGEMENT (ATKINSON) WAS TO FALL IN LINE WITH PRODUCTION'S LEAD
0761	RV-P		ABM 7/12/84,28	E	QA MANAGER (ATKINSON) WOULD, ON OCCASION, DIRECT INSPECTOR TO ONLY LOOK AT A SPECIFIC WELD; "DON'T LOOK RIGHT, DON'T LOOK LEFT."
0762	RV-P		ABM 7/12/84,28	E	THE COMPLETE SPECIFICATION WAS NOT ADHERED TO, ONLY A FEW COMPONENTS WOULD BE ADHERED TO
0763	RV-P		ABM 7/12/84,28	E	NO EVIDENCE THAT WORK WAS DONE PER PROCEDURE (I.E., SCORCHED PAINT, WAS RESIDUE FROM TEMP. STICKS, ETC.)
0764	RV		ABM 10/10/84,28	E	MANAGEMENT LOVED THE REWORK THAT WOULD RESULT FROM SCREW-UPS
0765	RV		ABM 10/10/84,28	E	DAYSHIFT QC "BOUGHT-OFF" WORK MORE THAN NIGHTSHIFT
0766	OI		ABM 12/16/85, 33	P	SENSITIVE
0767	OI		ABM 12/16/85, 33	P	SENSITIVE
0768	RV		ABM 10/10/84,28	E	DOCUMENTS NOT UP-TO-DATE WHEN THE SHIFT CHANGES

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0769	OI		ABM 12/16/85, 33	P	SENSITIVE
0770	OI		ABM 12/16/85, 33	P	SENSITIVE
0771	RV-P		ABM 7/12/84,28	E	ANDERSON/SUPERVISOR THOUGHT ALLEGER USED THE HOLD TAG TOO MUCH; ALLEGER NOT ALLOWED TO HANG HOLD TAGS
0772	RV-P	DCL-84-328	ABM 10/24/84,28	P	HOLD TAGS REMOVED WITHOUT PROPER AUTHORIZATION
0773	RV-P		ABM 7/12/84,28	P	WORK ACCOMPLISHED WAS NOT PER SPECIFICATION
0774	OI		ABM 12/6/85, 33	P	SENSITIVE
0775	RV-P	DCL-84-328	ABM 10/24/84,28	E	VAULT AUDIT FINDINGS (UNOFFICIAL) - INCOMPLETE FUEL INSPECTION FORMS, CHECK MARKS MISSING, INITIALS MISSING, WELDER'S NAMES MISSING
0776	RV-P	DCL-84-343	ABM 12/17/84,28	E	VISUAL INSPECTION OF THE FIRST WELD PASS WAS MISSED 10% OF THE TIME
0777	RV-P	DCL-84-328	ABM 10/24/84,28	E	ONLY THE WELDER WHO COMPLETED THE WELD WOULD APPEAR ON RECORD
0778	RV-P	DCL-84-343	ABM 12/17/84,28	E	INSPECTIONS WERE DOCUMENTED "AFTER THE FACT"
0779	OI		ABM 12/6/85, 33	P	SENSITIVE
0780	OI		ABM 12/6/85, 33	P	SENSITIVE
0781	RV-P	DCL-84-343	ABM 12/17/84,28	P	QC PROBLEMS WERE HANDLED INFORMALLY, BY MEMO FROM NIGHT SHIFT TO DAY SHIFT

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0782	OI		ABM 12/6/85, 33	P	SENSITIVE
0783	RV-P	DCL-84-328	ABM 10/24/84,28	E	AN INDIVIDUAL WAS SITTING THERE WRITING "OK" ON DOCUMENTATION
0784	RV-P	DCL-84-328	ABM 10/24/84,28	E	DOCUMENTATION WAS REWRITTEN AND SIGNATURES TRANSFERRED WITHOUT PROCEDURES AND ADEQUATE DOCUMENTATION TO "CLEAN UP" PAPER
0785	RV		ABM 10/10/84,28	E	THERE WAS A "PANDEMONIUM" IN DOCUMENTING THE EARLY WELDING WORK
0786	RV		ABM 10/28/85, 33	P	NRC WAS NOT AVAILABLE AT NIGHT; THERE WERE NO AVENUES TO REPORT HARASSMENT
0787	RV-P	DCL-84-343	ABM 12/17/84,28	E	INSPECTIONS WERE BACKFIT, SUCH AS VISUAL INSPECTION AFTER THE FACT -- TOO LATE, CAN'T VERIFY
0788	RV		ABM 10/10/84,28	E	LESS CAPABLE WELDERS WERE KEPT OUT OF VISIBLE AREAS
0789	RV-C		85-27, 33	E	WELD EXTENSION BARS HAD BEEN INSPECTED AND BOUGHT OFF, BUT THEY DID NOT MEET SPECS AND DWG REQUIREMENTS
0790	RV		ABM 7/12/84,28	P	MEMORIES, NOT PROCEDURES, WERE USED IN SOME CASES FOR PIPE SUPPORT INSTALLATION IN DIRECT CONFLICT WITH DESIGN DRAWINGS (RE:WELDING OF BOLTS TO LINER)
0791	RV		ABM 10/10/84,28	P	INITIALLY, ENGINEERING SPECS AND WELD PROCEDURES WERE IN A STATE OF CHAOS -- POOR DOC. CONTROL
0792	RV-P	DCL-84-343	ABM 12/17/84,28	P	POOR DRAWING CONTROL IN PULLMAN AND ATKINSON

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0793	RV-C		ABM 7/26/85, 33	P	DRAWINGS, WELD PROCEDURES, SPECIFICATIONS WERE OUT DATED OR NOT COMPLETE
0794	RV		ABM 7/26/85, 33	P	"TRUST" WAS USED TO VERIFY WORK WAS DONE TO SPEC, NOT ALWAYS OBSERVATION
0795	RV-P	DCL-84-343	ABM 12/17/84,28	E	WORK NOT PERFORMED IN ACCORDANCE WITH ESD'S
0796	RV-P		ABM 7/12/84,28	E	PARTICULAR PORTIONS OF SPECIFICATION WERE IGNORED
0797	RV		ABM 10/10/84,28	E	DURING ATKINSON "HOSGRI MOD", QC WAS SPREAD REAL THIN
0798	RV		ABM 10/24/84,28	E	QA HAD VERY LITTLE INFLUENCE
0799	RV		ABM 10/24/84,28	E	QC INSPECTORS HAD BASICALLY NO POWER
0800	RV-P	DCL-84-328	ABM 10/24/84,28	E	IT WAS IMPOSSIBLE FOR QC TO GET A WELDER RECALLED FOR RETEST
0801	RV-P	DCL-84-343	ABM 12/17/84,28	E	QC COULD NOT REJECT WORK
0802	RV-P	DCL-84-343	ABM 12/17/84,28	E	QA/QC NOT INDEPENDENT FROM PRODUCTION
0803	RV-P	DCL-84-343	ABM 12/17/84,28	P	QC INSPECTOR NEVER FOUND OUT DISPOSITION OF NCR
0804	OI		ABM 12/6/85, 33	P	SENSITIVE
0805	RV-P	DCL-84-343	ABM 12/17/84,28	P	THERE WAS NO IN-HOUSE SYSTEM TO REPORT PROBLEMS OBSERVED OUTSIDE OF QC INSPECTOR'S RESPONSIBILITY
0806	RV-P	DCL-84-362	ABM 12/17/84,28	E	AN INDIVIDUAL TOOK SOME LIBERTIES IN BUYING OFF WELDS ON THE FUEL HANDLING BUILDING CRANE RAILS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0807	RV		81-20,28	E	FUEL HANDLING BUILDING CRANE RAIL WELDS HAD SLAG AND EXCESSIVE UNDERCUT, IN A STATE OF SLOPPINESS
0808	RV		ABM 10/10/84,28	E	I&E WOULD NOT ALLOW A PARTICULAR INDIVIDUAL TO POINT OUT A PARTICULAR PROBLEM DURING PLANT TOUR
0809	01		ABM 12/16/85, 33	P	SENSITIVE
0810	RV		ABM 10/24/84,28	E	BROKEN TACK WELDS FREQUENTLY WELDED RIGHT INTO FINAL WELD
0811	RV-P	DCL-84-328	ABM 10/24/84,28	E	WELDERS WHO DID WORK WERE NOT ACCURATELY DOCUMENTED
0812	RV-P	DCL-84-343	ABM 12/17/84,28	E	DEFECT IN GUSSET PLATE (IN TURBINE BUILDING ON THE CENTERLINE OF THE ROOF IN THE LOWER CORD)
0813	NRR	DCL-84-195/328 DCL-85-097	28/33	E	PLANT IS BUILT ON UNDERGROUND STREAM BED WHERE GRANITE WAS PREDICTED (TURBINE BUILDING, WEST SIDE)
0814	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN-STAINLESS ELECTRODES CAME OUT TO FIELD COLD IN A ROD OVEN, BUT IT WAS NOT PLUGGED IN
0815	RV		ABM 7/12/84,28	U	STAINLESS STEEL WITH HIGH CARBON CONTENT [.04 MIN.], WHICH, WHEN WELDED BECOMES SENSITIZED
0816	NRR		28	E	DESIGN LIFE OF THE PIPING SYSTEMS WITH SENSITIZED STAINLESS STEEL WILL NOT BE AS LONG AS THEY SAID
0817	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN POWER PRODUCTS WELDING ENGINEER PROVIDED FALSE STATEMENT THAT CODE DOES NOT HAVE REJECTION CRITERIA FOR POROSITY

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WHEN WELDING WITH COATED SS ELECTRODES FOR SHIELDED METAL ARC
0818	RV-P	DCL-84-343	ABM 12/17/84,28	E	MISHANDLING OF COATED STAINLESS STEEL ELECTRODES COULD POSSIBLY CONTRIBUTE TO INTERGRANDULAR STRESS CORROSION CRACKING-PULLMAN
0819	NRR		28	E	OBSERVED SS WITH WIDE BEADS, INDICATING LARGE HEAT INPUT - WHICH WOULD TEND TO MAKE THAT STAINLESS STEEL MORE SUSCEPTIBLE TO SENSITIZATION/STRESS CORROSION CRACKING - PULLMAN (SEE ALL# 816)
0820	RV		ABM 10/24/84,28	U	PG&E HAS MADE MATERIAL FALSE STATEMENTS BY OMISSION IN A NUMBER OF CASES
0821	RV		ABM 7/12/84,28	P	ESSENTIAL VARIABLE(S) WELDING OR JOINT DESIGN WAS NOT TRACKED SUFFICIENTLY WELL BY PULLMAN
0822	RV-P	DCL-84-343	ABM 12/17/84,28	P	FOLEY WELD ROD CONTROL DOES NOT GIVE VERIFICATION TO WELDER THAT RIGHT AMOUNT OF ROD TURNED IN
0823	RV-P	DCL-84-328	ABM 10/24/84,28	E	QC INSPECTORS PERFORMING INSPECTIONS WITHOUT BEING QUALIFIED LEVEL 1
0824	RV-P		ABM 7/12/84,28	P	LACK OF APPROPRIATE TRAINING FOR QC INSPECTORS TO MEET ANSI STANDARD REQUIREMENTS
0825	RV		ABM 7/12/84,28	P	JOINT CONFIGURATIONS IN RUPTURE RESTRAINTS AND PIPE SUPPORTS NOT DETAILED OR ILLUSTRATED IN WPS CODE 7/8
0826	RV		ABM 7/12/84,28	P	WELD PROCEDURE CODE 7/8 DID NOT IDENTIFY THE STRUCTURAL STEEL SHAPES BEING WELDED

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0827	RV		84-36,28	P	STATEMENT THAT THE WELDING OF STUDS USING CODE 7/8 IS QUALIFIED IAW ASME SECTION 9 IS FALSE BASED ON NO CONTROLLING DOCUMENT DESCRIBING THE JOINT CONFIGURATIONS
0828	RV		ABM 7/12/84,28	P	THE FACT THAT ANSI B31-1 AND ANSI B31-7 AND ASME SECTION 9 ARE THE ONLY REQUIREMENTS IN CONTRACT SPECIFICATION 87-11 APPLICABLE TO PIPE SUPPORTS IS A FALSE STATEMENT
0829	RV		ABM 7/12/84,28	E	A-515 STEEL BEING USED IS NOT INCLUDED AS A PRE-QUALIFIED STEEL OF AWS
0830	RV		ABM 7/12/84,28	P	WELDING WAS PERFORMED THROUGH THE USE OF CODE 15/16 WHICH WAS AN UNAPPROVED, UNAUTHORIZED WELD PROCEDURE
0831	RV		ABM 7/12/84,28	E	FOR WELDS MADE IN 1975-76 PROCESS SHEETS REFERENCE CODE 7/8 BUT ROD REQUISITIONS REFERENCE CODE 92/93
0832	RV		ABM 7/12/84,28	P	DOUBLE BEVEL GROOVE WELDS USED TO WELD THREADED STUDS WERE NOT DESCRIBED IN CODE 7/8
0833	RV-C		85-27, 33	E	A WELDER DISREGARDED ISOMETRIC DRAWING, FIELD INSTALLATION INSTRUCTION, PROCESS SHEET INSTRUCTION, WELD ROD REQUISITION INSTRUCTION AND THEN INCORPORATED HIS OWN WELDING PROCEDURE
0834	RV		84-36,28	P	CODE 7/8 DOES NOT DESCRIBE THE NUMEROUS JOINT CONFIGURATIONS USED FOR PIPE SUPPORTS
0835	RV		ABM 7/12/84,28	P	FOR RUPTURE RESTRAINTS UP TO AND INCLUDING THE 1-31-79 REVISION OF ESD

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					243, THERE WERE NO INSTRUCTIONS CONTROLLING THE JOINT CONFIGURATIONS THAT DEVIATED FROM WELD PROCEDURE CODE 7/8
0836	RV		ABM 7/12/84,28	P	NO QC CONTROL DURING CONSTRUCTION PROCESS AS REQUIRED BY THE CONTRACT SPECIFICATIONS
0837	RV		ABM 10/24/84,28	E	PG&E AFFIDAVIT STATEMENT THAT JOINT CONFIGURATIONS NOT EXPLICITLY DESCRIBED ARE NOT SIGNIFICANT IS FALSE
0838	NRR	DCL-84-195/328 DCL-85-097	28/33	E	3 CAISSON HOLES 65 TO 85 FT. DEEP DRILLED IN MID-1979 DRILLED INTO SANDSTONE VICE GRANITE THAT WAS SUPPOSED TO BE THERE(SEE ALLEGATION 813)
0839	NRR	DCL-84-195/328 DCL-85-097	28/33	E	ANCHORING BEDROCK FOR TURBINE IS SO FRACTURED THAT THERE WERE VEINS OF DIESEL OIL FROM LEAKING TANKS IN THE ROCK (SEE ALLEGATION 813)
0840	NRR	DCL-84-195/328 DCL-85-097	28/33	E	THE BEDROCK THAT THE PLANT IS ANCHORED TO IS NOT SOLID.THERE WERE MANY INSTANCES OF ANCHORING CABLES PULLING OUT OF THE ROCK AND LOSING THEIR TENSION (SEE ALLEGATION 813)
0841	RV-P	DCL-84-343	ABM 12/17/84,28	E	GEOLOGISTS DID NOT DO AN ADEQUATE JOB OF IDENTIFYING THE ROCK THAT THE PLANT IS BUILT ON AND THE FRACTURED NATURE OF IT
0842	RV-P	DCL-84-343	ABM 12/17/84,28	E	THE CORE DRILLERS DRILLED THROUGH A 16000 VOLT BUS BAR
0843	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E BLUEPRINTS NOT VERIFIABLE WITH REVISIONS SO UNCHECKED AND UNCONTROLLED

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					THAT THEY DON'T KNOW WHAT THEY HAVE OUT THERE
0844	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E DID NOT REPAIR BUS BAR AFTER IT WAS DRILLED INTO
0845	OI		ABM 12/16/85, 33	P	SENSITIVE
0846	RV-P		ABM 7/12/84,28	E	UNION MEN WOULD NOT FOLLOW THE BOLTING SPECS THEY WOULD USE IMPACT WRENCHES AND POSSIBLY OVERTORQUE OR OVERTENSION THE BOLTS (BOLTS WERE IN TURBINE BLDG ROOF SEE P15 LINES 10-13)
0847	RV-P		ABM 7/12/84,28	E	ASTM CODE INTENTIONS FOR BOLT TIGHTENING WERE NOT FOLLOWED
0848	RV		ABM 10/10/84,28	E	WHEN THE INSPECTOR DISCUSSED HIS CONCERNS ABOUT BOLTING WITH HIS SUPERVISOR HIS SUPERVISOR MADE NO COMMENTS
0849	RV-P	DCL-84-343	ABM 12/17/84,28	E	THERE WAS NO METHOD TO ENSURE THAT BOLTS WEREN'T BEING REUSED
0850	RV		ABM 10/10/84,28	E	MANY UNACCOUNTED FOR BOLTS WERE FOUND UPON COMPLETION OF JOB ON THE TURBINE BLDG ROOF
0851	RV		81-20,28	E	THE WELDS ON THE WEST CRANE RAIL OF UNIT 1 FUEL HANDLING WERE SERIOUSLY LACKING IN SPECIFICATION COMPLIANCE
0852	OI		ABM 12/16/85, 33	P	SENSITIVE
0853	RV		ABM 10/24/84,28	E	COMPANY HIRED WELDING INSPECTORS WHO COULD NOT WELD OR WERE NOT QUALIFIED

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0854	RV		ABM 10/24/84,28	E	INSPECTORS DID NOT CONTINUOUSLY MONITOR WELDER TESTS A STAND IN COULD HAVE PERFORMED THE TEST WELDS FOR SOME WELDERS
0855	RV-P	DCL-84-343	ABM 12/17/84,28	E	WELDERS TAKING THEIR TEST SOMETIMES TOOK A WEEK.THE TEST SHOULD TAKE ONLY 4 HOURS
0856	RV-P	DCL-84-343	ABM 12/17/84,28	E	ONLY 1% OF THE WELDERS TAKING THE TEST FAILED IT.15-20% WOULD HAVE BEEN MORE REALISTIC
0857	RV-P	DCL-84-343	ABM 12/17/84,28	E	WHEN 35% OF THE STIFFENER PLATE WELDS FAILED THEY WERE REPAIRED USING THE SAME PROCEDURES THAT THEY WERE INITIALLY INSTALLED BY
0858	RV		ABM 10/24/84,28	E	THE ONLY WORK THAT IS CLOSE TO VERIFIABLE IS THE WORK DURING THE LATTER PARTS OF THE PROJECT.EARLY WORK HAS A SUSPICIOUS DUBIOUS QUALITY ASSURANCE
0859	RV		ABM 10/24/84,28	P	MATERIAL FALSE STATEMENTS MADE BY PG&E IN 9/21 ANSWER TO JI MOTION TO REOPEN RECORD WITH REGARD TO ACCEPTABILITY OF PULLMAN QA PROGRAM, LACK OF QUALIFIED NDE PROCEDURES AND RESPONSE TO ALLEGATIONS
0860	RV-P	DCL-84-328	ABM 10/24/84,28	P	IN PPP SELF-STUDY BOOK #2 10 CFR 50 APPENDIX B CRITERIA WAS INCORRECTLY PARAPHRASED
0861	NRR	DCL-84-162/195/220	26/28	U	DESIGN DRAWINGS DO NOT SPECIFY ELONGATED HOLES (SEE SSER 26, PG E-10 AND ALLEGATION 351 IN SSER 28)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0862	NRR	DCL-84-162/195/220	26/28	U	HOLE SIZES ARE OUTSIDE OF CODE SPECIFICATIONS (SEE SSER 26, PG E-10 AND ALLEGATION 351 IN SSER 28)
0863	NRR		26/28	E	THE BOLT TORQUING METHODS VIOLATE AISC REQUIREMENTS (SEE SSER 26, PG E-10 AND SSER 28)
0864	NRR		26/28	E	BOLT REUSE CRITERIA IS NOT IN ACCORDANCE WITH AISC REQUIREMENTS (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0865	NRR		26/28	E	OVERSIZED HOLES IN BASE PLATES PACKED WITH STEEL ROD WITHOUT THE BENEFIT OF PROCEDURE.THE WORK WAS PERFORMED BY MEMO (SEE SSER 26, PG E-10 AND ALLEGATION 755 IN SSER 28)
0866	NRR		26/28	U	OVERSIZE HOLES ALREADY QC ACCEPTED OUTSIDE THE TOLERANCES OF ESD243 AND AISC MANUAL (SEE SSER 26, PG E-10 AND ALLEGATION 351 IN SSER 28)
0867	RV-P	DCL-84-328	ABM 10/24/84,28	E	UNAUTHORIZED MODS TO FILLET WELDS ENCROUCHED ON BOLT OR WASHER LAND AREAS
0868	NRR		26/28	E	BOLT TORQUE TABLES IN ESD 243 WERE OUT OF COMPLIANCE WITH AISC REQUIREMENTS IN DEC 83 (SEE SSER 26, PG E-10 AND ALLEGATION 863 in SSER 28)
0869	RV-P	DCL-84-343	ABM 12/17/84,28	E	FIELD INSPECTORS DIDN'T KNOW NOR WERE THEY LEGALLY ABLE TO REJECT BOLTS THAT WERE DEFECTIVE PER ASTM A-490 ASTM-325 AND ANSI B18.2 REQUIREMENTS
0870	NRR		26/28	E	ACCEPTANCE CRITERIA FOR HIGH STRENGTH BOLTS WAS NOT DEFINED IN ESD 243 (SEE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0871	NRR	DCL-84-243	26/28	E	PROCEDURE (ESD 243) TABLES OF ACCEPTABLE WASHERS WERE NOT UPDATED IN LATE '83 PER AISC SEC 5 PAGE 191 PARA 2(A) (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0872	NRR	DCL-84-243	26/28	E	NCR DC2-80-RM-002 WAS DEFICIENT ON A-490 TENSIONING CRITERIA AS COMPARED TO AISC REQUIREMENTS (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0873	NRR	DCL-84-243	26/28	E	THERE ARE EXAMPLES OF PACKING FOREIGN MATERIAL IN BOLT HOLES CONTRARY TO AISC REQUIREMENTS (SEE SSER 26, PG E-10 AND ALLEGATION 755 IN SSER 28)
0874	NRR	DCL-84-243	26	R	OVERSIZED WELDS BEYOND THAT ALLOWED BY AWS D1.1 AND ESD 243 (SEE SSER 26, PG E-5)
0875	RV-P	DCL-84-343	ABM 12/17/84,28	E	DEFECTS IN A-490 BOLTS HAD BEEN FOUND AFTER THE BOLTS HAD BEEN 'DEDICATED" BY PPP/QA RECEIVING DEPARTMENT AND SENT TO FIELD FOR INSTALLATION
0876	RV		ABM 7/12/84,28	U	GRINDING GOUGE IN WELD ATTACHING SAFETY INJECTION ACCUMULATOR LINE TO COLD LEG NOZZLE
0877	NRR		26	R	MATERIAL FALSE AND/OR MISLEADING STATEMENTS MADE BY PG&E/BECHTEL IN MEETING ON 4-2-84 BETWEEN PG&E AND THE NRC ON DC1 (SEE SSER 26, PG E-5)
0878	RV		ABM 7/12/84,28	E	MANAGEMENT SUPPRESSED THE USE OF DPS (DIABLO PROBLEMS) SUCH AS NCRS, DRS &

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					DCNS.DPS WERE USED TO REPORT PROBLEMS ON BOTH UNITS
0879	OIA		ABM 1/7/86, 33	P	NRC COUNSELED ALLEGER TO NOT DEAL WITH GAP OR MOTHERS
0880	RV		ABM 10/10/84,28	E	HAD I BEEN ALLOWED TO ACCOMPANY THE TOUR, I COULD HAVE PROVIDED FIRST-HAND EXAMPLES OF WORKMANSHIP THAT WOULD HAVE VIOLATED AISC SPECIFICATION ASTM A325 & A490 SECTIONS 3, 5, 6 & COMMENTARY
0881	RV-P	DCL-84-328	ABM 10/24/84,28	E	BOLTING PROGRAM FOR RUPTURE RESTRAINTS AS PRACTICED BY PPP NOT IN ACCORDANCE WITH CONTRACT SPEC 8833XR FOR STRUCTURAL STEEL ERECTION (IE NOT FOLLOWING AISC MANUAL, 7TH EDITION)
0882	RV-P	DCL-84-328	ABM 10/24/84,28	P	RUPTURE RESTRAINT BOLTING DEFECTS WERE NOT REPORTED PER 10 CFR 21.21
0883	RV-P	DCL-84-328	ABM 10/24/84,28	P	QA PROGRAM BREAKDOWN IN THE DESIGN CHANGE AREA IN THAT DESIGN DRAWINGS DID NOT REFLECT UNAUTH MODS TO FILLET WELDS BECAUSE ENGINEERING ISSUED NO AS-BUILTS AFTER MOD WAS COMPLETED
0884	RV-P	DCL-84-328	ABM 10/24/84,28	P	FIELD ENGINEER ISSUED PROPER WASHER CRITERIA W/O NOTIFYING PPP OR PG&E QA. WHEN QA/QC MANAGER WAS INFORMED THAT ESD 243 HAD IMPROPER CRITERIA, NO NCR OR ESD UPDATE WAS MADE
0885	NRR	DCL-84-243	26/28	E	PPP DID NOT HAVE PROPER TORQUE TABLES IN EFFECT 3 YEARS AFTER WRITING NCR DC2-80-RM-002 (SEE SSER 26, PG E-10 AND ALLEGATION 863 in SSER 28)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0886	RV-P	DCL-84-328	ABM 10/24/84,28	P	PPP DID NOT TRAIN INSPECTORS ON AISC BOLTING CRITERIA
0887	OI		ABM 2/12/86,33	P	SENSITIVE
0888	RV		ABM 7/12/84,28	U	FIVE PROBLEMS DISCLOSED DURING PLANT TOUR WITH NRC STAFF EXHIBIT 6 EXPANDS CODE ISSUES
0889	NRR		26	D	PG&E STATED THAT ALL SUPPORTS WERE QUALIFIED WHEN SIX SUPPORTS WERE STILL UNQUALIFIED (SEE SSER 26, PG E-5)
0890	NRR		28	D	SAME PERSON WHO ORIGINALLY PERFORMED A CALCULATION (DESIGNER) WAS ALSO THE PERSON WHO CHECKED THE CALCULATION (CHECKER).PG&E STATED OTHERWISE
0891	NRR		28	D	DESIGN DID NOT HAVE CONTROLLED DOCUMENTS THAT THEY NEEDED TO REDUCE THE POSSIBILITY OF CALCULATION ERRORS PG&E STATED OTHERWISE (SEE ALLEGATION 890)
0892	NRR		28	E	PG&E STATES THAT ENGINEERS WERE TOLD TO WRITE SUPERCEDED ON OLD DOCUMENTS IN THEIR DOCUMENT BOOK IN 11 MONTHS.THE ALLEGER WAS NEVER TOLD THIS
0893	NRR		28	E	PG&E STATES THEY HAVE A MONTHLY REVIEW PROGRAM TO REVIEW WHAT DOCUMENTS ARE IN EACH ENGINEER'S POSSESSION IN 11 MONTHS, THEY NEVER DID THIS
0894	NRR		28	E	PG&E CHANGED THE MONTHLY REVIEW TO A PERIODIC REVIEW WHICH WAS AFTER THE INSPECTION PERFORMED BY THE NRC, THUS MISLEADING THE NRC

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0895	NRR		28	E	PG&E STATED THAT ALL DOCUMENTS WERE UP TO DATE AS OF NOV. '82 BUT A DOCUMENT ISSUED TO STOKES IN JAN. '82 WAS 3 REVISIONS OUT OF DATE
0896	NRR		33	E	PG&E STATES THAT THE CAUSE OF SUPERCEDED DOCUMENTS BEING USED WAS THAT ENGINEERS KEPT THE OLD ONES AFTER BEING ISSUED SUPPLEMENTS.ALLEGER FEELS IT WAS MANAGEMENT'S FAULT
0897	NRR		28	E	PG&E STATES THERE ARE TRAINING PROGRAMS IN FORCE CONCERNING DOCUMENT CONTROL.ALLEGER STATES HE NEVER GOT ANY TRAINING
0898	NRR		28	D	PG&E STATES THAT DIABLO PROBLEMS (DP) WAS NOT A QA DOCUMENT BECAUSE THEY WERE A SUBSTITUTE FOR QA BUT IT ACTUALLY ALLOWED THEM TO BYPASS QA PROGRAM (SEE ALLEGATION 368)
0899	NRR		28	D	PG&E SAYS THEY USE MORE SOPHISTICATED TECHNIQUES FOR MORE DETAILED ANALYSIS TO SHOW THAT PIPE AND SUPPORTS ARE ACCEPTABLE BUT THE SUBSEQUENT CALCULATION WHICH PASSED THE SUPPORT WAS LESS SOPHISTICATED
0900	NRR		26	D	PG&E STATES THEY USED THE LOWEST TENSION OF 2000 LBS. WHEN IN FACT THE LOWEST TENSION IS 900 LBS. (SEE SSER 26, PG E-5)
0901	NRR		26	D	PG&E SAID A SAMPLE SIZE WAS 5000' FOR 25000' AND5000' FOR 15000'IN ANOTHER PLACE. LATER THEY SAID THE SAMPLE REMAINED THE SAME THROUGH THE SMALL BORE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					REVERIFICATION PROGRAM (SEE SSER 26, PG E-5)
0902	RV		ABM 7/12/84,28	U	PG&E STATES ALL STEEL AT DIABLO CANYON COMPLIES WITH AMERICAN STANDARDS 2T MINIMUM RADIUS.SOME STEEL WAS FOUND WITH A 1.5T RADIUS
0903	RV		ABM 7/12/84,28	E	THERE WAS AN ATMOSPHERE IN THE PRE-INSPECT GROUP THAT PEOPLE SHOULD NEITHER BE REPORTING MAJOR PROBLEMS NOR PURSUEING THEM.THIS ATTITUDE SEEMED TO COME FROM MANAGEMENT
0904	RV-P	DCL-84-343	ABM 12/17/84,28	E	SF DESIGN TEAM ATTEMPTED TO CUT OFF TIME FOR ISSUING DRAWING TO THE FIELD THEREBY VIOLATING DOCUMENT CONTROL PROCEDURES WITHOUT REPORTING THE PROBLEM.COULD CAUSE WORK TO OCCUR W/O APPROVED DRAWINGS
0905	OI		ABM 12/16/85, 33	P	SENSITIVE
0906	RV-P	DCL-84-343	ABM 12/17/84,28	E	ALLEGER WAS TOLD NOT TO DO RESEARCH AS TO THE CONFLICT BETWEEN TWO RED LINE MEMOS.ALSO TOLD TO DROP THE SUBJECT OF DRILLING ANCHOR BOLT HOLES ALLEGEDLY AGAINST A PROCEDURE
0907	RV-P	DCL-84-343	ABM 12/17/84,28	E	STARTED RECEIVING A BACKLOG SO THE ALLEGER STARTED ELIMINATING THE CHECKING PORTION OF A HANGER PACKAGE
0908	RV-P	DCL-84-343	ABM 12/17/84,28	E	A PROCEDURE SAID TO VERIFY ALL GROOVE WELDS BUT PPP WASN'T VERIFYING ALL THE GROOVE WELDS.ANOTHER ONE SAID TO EXPLAIN CROSS-OUTS ON THE BACK OF PROCESS SHEETS.THE ALLEGER WAS TOLD TO IGNORE INST.

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0909	RV-P	DCL-84-328	ABM 10/24/84,28	P	TOLD NOT TO REJECT HANGERS FOR WELDS THAT WERE SUPPOSEDLY MADE TO CODE 7/8 BUT WERE NOT COVERED BY CODE 7/8
0910	OI		ABM 12/6/85, 33	P	SENSITIVE
0911	RV-P	DCL-84-343	ABM 12/17/84,28	E	DESIGN ENGINEERS IN THE PRE-INSPECT PROGRAM WITH NO FIELD EXPERIENCE DIDN'T KNOW HOW TO USE FILLET GAUGES TO MEASURE WELD SIZES.
0912	OI		ABM 3/13/86,33	P	SENSITIVE
0913	OI		ABM 12/6/85, 33	P	SENSITIVE
0914	OI		ABM 12/16/85, 33	P	SENSITIVE
0915	RV-P	DCL-84-343	ABM 12/17/84,28	E	VIOLATION OF QC INSPECTION HOLD POINTS
0916	RV-P	DCL-84-328	ABM 10/24/84,28	E	FOLEY QA/QC DEPARTMENT WAS SUBJECTED TO PRODUCTION PRESSURE
0917	RV-P	DCL-84-343	ABM 12/17/84,28	E	QUALITY ENGINEERING DEPARTMENT SET UP THEIR OWN SEPARATE ENTITY FOR HANGING RED TAGS
0918	RV-P	DCL-84-328	ABM 10/24/84,28	E	CUTS WERE MADE IN BETWEEN SPOT WELDS HOLDING UNISTRUTS TOGETHER . NO NCR'S GENERATED
0919	RV-P	DCL-84-362	ABM 12/17/84,28	E	MISSING HEAT LOG NUMBERS AND LACK OF MATERIAL TRACEABILITY VIA HEAT NUMBERS E. G. HT NO INDICATES ONE INCH METAL WHEREAS METAL ACTUALLY THREE-QUARTERS
0920	RV		ABM 7/12/84,28	E	UNQUALIFIED QC SUPERVISORS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0921	RV		ABM 10/24/84,28	U	FIELD DRAWINGS PRESENTED A MIRROR IMAGE PROBLEM CAUSING CONFUSION FOR QC INSPECTORS
0922	RV-P		ABM 7/12/84,28	E	UNCONTROLLED WELDERS STAMPS
0923	RV-P		ABM 7/12/84,28	E	WELDER QUALIFICATIONS QUESTIONABLE DUE TO WORN BEND TEST MACHINE USED DURING WELDER QUALIFICATION
0924	RV-P		ABM 7/12/84,28	E	CONTINUAL RETESTING OF FAILED WELDERS WAS ALLOWED WITHOUT FURTHER TRAINING OR PRACTICE AS REQUIRED BY AWS DI.1
0925	RV-P	DCL-84-343	ABM 12/17/84,28	U	FOREIGN STEEL USED TO FAB CRANE RAILS IN THE TURBINE BLDG
0926	RV		ABM 7/12/84,28	U	UNDERCUT AND GOUGES ON REACTOR COOLANT PIPING
0927	RV-P	DCL-84-343	ABM 12/17/84,28	E	PROCEDURES DID NOT HAVE UP-TO-DATE PCN'S PROCEDURE CHANGE NOTICES
0928	RV-P	DCL-84-328	ABM 10/24/84,28	P	PULLMAN INSPECTOR HAD SPECIFIC INSTRUCTIONS NOT TO ADDRESS OLD RUPTURE-RESTRAINT WORK THAT HAD BEEN PERFORMED BY A VENDER-ONLY INSPECT PULLMAN WORK/WELDS
0929	OI		ABM 2/12/86,33	P	SENSITIVE
0930	OI		ABM 2/12/86,33	P	SENSITIVE
0931	RV-P	DCL-84-328	ABM 10/24/84,28	E	INTIMIDATION - PULLMAN QC SUPERVISOR SAID INSPECTOR REQUEST TO PERFORM A CHECK OF GAS FLOW RATE CLOSER TO WORK WAS IN HIS OPINION EXCESSIVE AND HE WAS NOT GOING TO FORCE IT ON CRAFT

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0932	RV-P	DCL-84-328	ABM 10/24/84,28	E	PULLMAN WELDING MACHINES DID NOT MEET PG&E CONTRACT SPEC. 8711, SECTION 1, PARA 7.10.1: NO HI FREQUENCY FOR ARC-STARTING OR RHEOSTAT FOR CURRENT-CONTROL CAPABILITIES (GAS TUNGSTEN ARC WELD MACHINE)
0933	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN INSPECTORS WERE SPECIFICALLY INSTRUCTED TO ONLY CONSULT PULLMAN PROCEDURES FOR EVALUATIONS-PREVENT FROM PERFORMING AS AN ANSI N45.2.6 INSPCTOR
0934	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN PROCEDURE ESD 243 HAS NO REJECTION CRITERIA FOR BOLTS DEFECTS IN 490 BOLTS - LONGITUDINAL QUENCH CRACKS
0935	RV		ABM 10/24/84,28	P	PG&E STATEMENT DCL-84-082 WHICH HAS ALLEGED THAT PULLMAN INSPECTORS ARE CERTIFIED TO ANSI N45.2.6 REQUIREMENTS IS TOTALLY FALSE-FIVEPOINTS WERE NOTED WHY STATEMENT WAS FALSE
0936	RV		ABM 8/23/84,28	U	PULLMAN AND PG&E'S POSITION WAS THAT THE FAILURE OF FIELD WELD 212 WAS A SPECIFIC CASE - WHILE THERE IS EVIDENCE INDICATING THAT IT WAS MORE OF A GENERIC PROBLEM WITH THESE WELDS (197 &212)
0937	RV-P	DCL-84-343	ABM 12/17/84,28	U	PULLMAN VIOLATED MINIMUM WALL DURING REPAIR WELDING - FIELD WELD 197
0938	RV-P	DCL-84-343	ABM 12/17/84,28	U	PROBLEMS WITH FIELD WELD 197 SHOULD HAVE BEEN REPORTED BY LICENSEE TO NRC
0939	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN EMPLOYEE HAD A HABIT OF NOT INCLUDING ALL THE DISCREPANCIES ON HIS RADIOGRAPHIC CHECK SHEET IN HIS PULLMAN REPORTS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0940	RV-P		ABM 7/12/84,28	U	DR3370 ON SG FW 197; PULLMAN: EMPLOYEE ACCEPTED RADIOGRAPHS BEFORE HE WAS CERTIFIED TO DO SO
0941	RV		ABM 8/23/84,28	U	PG&E REPORT NO.411-77.55(FW-#212) HAS TEN PROBLEMS THAT SEEMS TO INDICATE THE REPORT WAS EITHER PUT TOGETHER WITH GROSS NEGLIGENCE OR AN ACTIVITY COVER UP TO HIDE GENERIC PROBLEM
0942	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON HIRED UNQUALIFIED WELDING INSPECTORS
0943	OI		ABM 11/14/85, 33	P	SENSITIVE
0944	RV-P	DCL-84-343	ABM 12/17/84,28	P	ATKINSON WELD TEST BOOTH SUPERVISORS WERE NOT REQUIRED TO BE IN CONTINUOUS ATTENDANCE DURING WELDER TESTING
0945	RV-P	DCL-84-343	ABM 12/17/84,28	E	BOLTS ATTACHING PIPE HANGER AND SUPPORTS IN THE DIESEL GENERATOR BUILDING MAY NOT HAVE PROPER TORQUES
0946	RV-P	DCL-84-343	ABM 12/17/84,28	E	QA INSPECTORS TOLD NOT TO LOOK AT "OLD WORK"
0947	RV		ABM 10/24/84,28	E	A QA INSPECTOR FELT THAT HE WAS DISCOURAGED FROM REVIEWING TECHNICAL STANDARDS AND CODES
0948	RV		ABM 10/24/84,28	U	PG&E MADE A FALSE STATEMENT IN LETTER DCL-84-115 DATED MAR 23, 1984 ABOUT WELDER QUALIFICATION
0949	RV-P	DCL-84-343	ABM 12/17/84,28	E	A QC INSPECTOR OVERLOOKED SLAG DEPOSITS ON 3 OF 12 WELDS
0950	RV-P	DCL-84-343	ABM 12/17/84,28	p	RUPTURE RESTRAINTS OUTSIDE THE CONTAINMENT VESSEL UNIT 2 LOCATION

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					24-46-10 OVER 11-RT NEAR BENT 1.HAD INADEQUATE NDE PREPARATION AND WERE INSPECTED
0951	RV-P	DCL-85-077	ABM 3/26/85,28	P	SOME "RAT HOLE" WELDS WERE NOT INSPECTED WITH NDE BECAUSE A SUPERVISOR SAID THAT THEY WERE INACCESSABLE A QA INSPECTOR SAYS THAT THEY COULD HAVE BEEN INSPECTED
0952	RV-P	DCL-84-328	ABM 10/24/84,28	E	A QC INSPECTOR ROUTINELY CONDUCTED NDE WITHOUT ADEQUATE WELD PREP
0953	RV-P	DCL-84-328	ABM 10/24/84,28	E	PG&E ACCEPTED WELDS IMPROPERLY INSPECTED USING AC-DC MAGNETIC PARTICLE TEST EVEN 3 THAT FAILED INSPECTION
0954	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E RESPONSES ABOUT OC INSPECTOR QUALIFICATIONS CONTAINED DISPARITYS
0955	RV-P	DCL-84-343	ABM 12/17/84,28	P	TWO ADDITIONAL QC INSPECTORS WERE NOT QUALIFIED
0956	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING TRAINING OF NEW EMPLOYEES (SEE SSER 26, PG E-5)
0957	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING CONSERVATISM OF PIPE SUPPORT CALCULATIONS (SEE SSER 26, PG E-5)
0958	NRR		26	D	MATERIAL FALSE STATEMENTS MADE BY PG&E IN MEETING WITH NRC CONCERNING CONTROL OF ENGINEERING MANUALS (SEE SSER 26, PG E-5)
0959	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					MANAGEMENT REVIEW OF EMPLOYEES MANUALS (SEE SSER 26, PG E-5)
0960	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING RESULT OF PG&E QA AUDITS IN AREA OF PIPING AND PIPE SUPPORT ANALYSIS (SEE SSER 26, PG E-5)
0961	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING DIABLO PROBLEMS (DP) PROGRAM (SEE SSER 26, PG E-5)
0962	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING PIPING SYSTEM WALKDOWNS (SEE SSER 26, PG E-5)
0963	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING JUDGEMENTS MADE BY QUICK FIX ENGINEERS (SEE SSER 26, PG E-5)
0964	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING CONTENT OF AS-BUILT PACKAGES (SEE SSER 26, PG E-5)
0965	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING PERCENTAGE OF ORIGINAL PIPE SUPPORT CALCULATIONS REQUIRING ADDITIONAL WORK (SEE SSER 26, PG E-5)
0966	NRR		26	D	ACCEPTANCE OF PIPE SUPPORTS BASED ON ENGINEERING JUDGEMENT NOT JUSTIFIED (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0967	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING THE USE OF PHONE CALLS TO PROVIDE DESIGN INFORMATION TO SITE (SEE SSER 26, PG E-5)
0968	NRR		26	D	MATERIAL FALSE STATEMENT MADE BY PG&E IN MEETING WITH NRC ON 4/21/84 CONCERNING CRITERIA USED IN ACCEPTANCE OF PIPE SUPPORTS (SEE SSER 26, PG E-5)
0969	RV-P	DCL-84-328	ABM 10/24/84,28	P	PG&E DOESN'T WANT PULLMAN TO REPORT DEFECTIVE SHOP WELDS
0970	OI		ABM 3/13/86,33	P	SENSITIVE
0971	RV-P	DCL-84-343	ABM 12/17/84,28	E	CARBON STEEL MATERIALS FOUND IN STAINLESS STEEL HOLD AREAS
0972	OI		ABM 3/13/86,33	P	SENSITIVE
0973	OI		ABM 3/13/86,33	P	SENSITIVE
0974	NRR		26/28	R	IMPROPER TORQUING OF BOLTS (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0975	OI		ABM 8/1/85, 33	P	SENSITIVE
0976	NRR		26/28	R	OVERSIZED HOLES IN BASE PLATE ON RUPTURE RESTRAINTS WITH SOME PACKED WITH CLIPPED WASHERS (SEE SSER 26, PG E-10 AND ALLEGATION 755 IN SSER 28)
0977	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E HAS POOR QA IN THE RUPTURE RESTRAINT REPAIR PROGRAM
0978	OI		ABM 3/13/86,33	P	SENSITIVE

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
0979	OI		ABM 3/13/86,33	P	SENSITIVE
0980	RV		ABM 10/24/84,28	E	INSPECTOR BOUGHT OFF WELDS WITHOUT PROPER DOCUMENTATION
0981	RV-P	DCL-84-343	ABM 12/17/84,28	E	IMPROPER FIT-UP OF LARGE BASE PLATE BEAM (ON HANGER) CAUSING AN IMPROPER WELD WHICH WAS BOUGHT OFF
0982	RV-P	DCL-84-343	ABM 12/17/84,28	E	A490 BOLTS DEFECTIVE WITH LONGITUDINAL QUENCH CRACKS AND FORGING LAPS ON THE HEAD
0983	NRR		26	R	OVERSIZE WELDS ON RUPTURE RESTRAINTS BEYOND THAT ALLOWED BY AWS 11 & PULLMAN'S ESD 243 (SEE SSER 26, PG E-5)
0984	NRR		26/28	E	OVERSIZE HOLES IN BASE PLATES ON RUPTURE RESTRAINTS THAT WERE PACKED WITH STEEL RODS AND WIRES WITHOUT AN APPROVED PULLMAN PROCEDURE (SEE SSER 26, PG E-10 AND ALLEGATION 755 IN SSER 28)
0985	NRR		26/28	U	OVERSIZE HOLES IN RUPTURE RESTRAINTS QC-ACCEPTED OUTSIDE THE TOLERANCES OF ESD 243 & AISC MANUAL (SEE SSER 26, PG E-10 AND ALLEGATION 351 IN SSER 28)
0986	RV-P	DCL-84-328	ABM 10/24/84,28	E	UNAUTHORIZED MODS TO FILL ET WELDS THAT ENCROACHED ON BOLT OR WASHER LAND AREAS
0987	RV-P	DCL-84-328	ABM 10/24/84,28	E	PG&E HAS NOT FOLLOWED THROUGH ON NCR REQUIRING PULLMAN TO PERFORM A COMPLETE REVERIFICATION OF WELDED AND BOLTED CONNECTIONS
0988	NRR		26/28	E	PULLMAN'S BOLTING PROGRAM DID NOT COVER THE SPECIFIC REQUIREMENTS REFERENCED IN

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					THE AISC MANUAL (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
0989	RV-P	DCL-84-328	ABM 10/24/84,28	E	PRODUCTION PERSONNEL DEFINING THE QUALITY OF WORK IN FIELD (WHICH IS NOT ALLOWED)
0990	RV		84-36,28	U	HANGER 7411A, IN UNIT 1, (LINE 1-G2-41-4 ISOMETRIC 1-8-30) ITEM 11 IS NOT WELDED PER DESIGN DRAWING REQUIREMENTS
0991	RV		84-36,28	U	PPP RECONSTRUCTED THE MATERIAL REQUISITION FORM FOR ITEM 11 WITHOUT FIRST DOCUMENTING THE DEFICIENCY (UNIT 1 VCT OUTLET)
0992	RV		84-36,28	U	ITEM 11 ON DRAWING SHEET 17 IS NOT WELDED PER THE DESIGN DRAWING SEE PO#9697 HT. NO AO 72803 FW
0993	RV		85-35,33	P	CONCERNING WELDING QC AT DIABLO CANYON
0994	RV-P	DCL-84-343	ABM 12/17/84,28	E	ATKINSON 78, INSPECTOR HOLD TAG CLEARED FROM WORK (TURBINE BDG.-119 LEVEL) UNDER QUESTIONABLE CONDITIONS; FOR WORK ON BARS TO SUPPORT THE DECKING-WELDS NOT TO CODE
0995	RV-C	DCL-84-343	85-27, 33	E	ATKINSON 78, INSPECTION WORK IN NORTHWEST CORNER ROOF AREA OF TURBINE BUILDING WAS PERFORMED BY QUESTIONABLE INSPECTOR
0996	OI		ABM 12/6/85, 33	P	SENSITIVE
0997	OI		ABM 12/6/85, 33	P	SENSITIVE
0998	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON 78, AUDIT OF VAULT FOUND UNACCEPTABLE PAPER WORK, INCOMPLETE FUEL

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					INSPECTION FORMS, CHECKMARKS MISSING, ETC - ESPECIALLY PREVALENT WAS THE MISSING 10 PERCENT SIGN OFF FOR WELDS
0999	RV-P		ABM 7/12/84,28	E	ATKINSON 78, INSPECTOR HAD HIS HOLD TAG PRIVILEGES MODIFIED AND THEN REMOVED, ALSO HOLD TAGS WERE REMOVED AND PRODUCTION REPERFORMED WORK
1000	OI		ABM 12/16/85, 33	P	SENSITIVE
1001	OI		ABM 12/16/85, 33	P	SENSITIVE
1002	OI		ABM 12/16/85, 33	P	SENSITIVE
1003	RV		ABM 10/10/84,28	E	ATKINSON 78, MANAGEMENT LOVED THE REWORK THAT WOULD GO ON BECAUSE OF THE MONEY THEY MADE
1004	RV-P		ABM 7/12/84,28	E	ATKINSON 78, PREHEAT WAS A PROBLEM ON HEAVIER STEEL (OVER 1-1/2 INCH) LIKE COLUMNS-SAW WORK WITH NO EVIDENCE OF PREHEAT
1005	RV-P		ABM 7/12/84,28	E	ATKINSON 78, INSPECTOR TOLD TO NOT LOOK RIGHT AND DO NOT LOOK LEFT WHEN ASSIGNED TO INSPECT A PARTICULAR WELD, JUST PERFORM INSPECTION ASSIGNED
1006	RV		ABM 10/24/84,28	E	A MAJOR PROBLEM WAS THE ATTITUDE OF THE QUALITY ASSURANCE MANAGEMENT FALLING IN LINE AND BEHIND PRODUCTION (ATKINSON 78)
1007	RV-P	DCL-84-328	ABM 10/24/84,28	E	ATKINSON 78; QUALITY CONTROL WAS SOMETHING THAT SORT OF DEVELOPED. IT WAS NOT THERE FROM THE START, SOME DOCUMENTS HAD TO BE BOUND BACK AND REWRITTEN TO OBTAIN ADEQUATE INSPECTION DOCUMENTS-SEE SHEAR

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1008	RV-P	DCL-84-343	ABM 12/17/84,28	E	CONTROL DOCUMENTS WERE NOT AUDITED--DOCUMENTS WERE OUT OF DATE
1009	RV-C	DCL-84-328	85-35,33		PEOPLE WHO WANTED TO DO THE JOB RIGHT WERE SEGREGATED FROM THOSE WHO DIDN'T CARE, AND THE TWO GROUPS WERE THEN GIVEN DIFFERENT TASKS
1010	NRR		26	D	AN ENGINEER'S PRELIMINARY CALCULATIONS WERE REDONE TO PASS ITEMS HE HAD PREVIOUSLY FAILED (SEE SSER 26, PG E-5)
1011	NRR		26	D	CALCULATIONS WERE CHANGED AND INPUT DATA CHANGED TO PASS A FAILED SUPPORT (SEE SSER 26, PG E-5)
1012	NRR		26	D	CALCULATIONS WERE CHANGED TO REDUCE THE REPORTED FAILURE RATE OF HANGERS TO KEEP IT BELOW 5 PERCENT (SEE SSER 26, PG E-5)
1013	NRR		26	D	CALCULATIONS REDONE TO PASS FAILING HANGERS--LESS ACCURATE TECHNICAL ASSUMPTIONS WERE USED (SEE SSER 26, PG E-5)
1014	OI		ABM 12/16/85, 33	P	SENSITIVE
1015	OI		ABM 1/3/86, 33	P	SENSITIVE
1016	OI		ABM 2/26/86,33	P	SENSITIVE
1017	OI		ABM 2/26/86,33	P	SENSITIVE
1018	RV		ABM 10/24/84,28	P	WELDERS NOT QUALIFIED TO ASME STANDARDS
1019	RV		ABM 7/12/84,28	P	IMPROPER WELDING PROCEDURES

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1020	NRR		26	R	QC FAILED HANGERS IN UNIT 1 AND II ONLY MODIFIED IN UNIT II (SEE SSER 26, PG E-5)
1021	RV-C		ABM 7/26/85, 33	E	FALSIFICATION OF HANGER DOCUMENTATION
1022	RV-C		ABM 7/26/85, 33	E	QC DEPT NOT PROPERLY DISPOSITIONING RED (HOLD) TAGS
1023	RV		82-01,28	E	VIOLATION OF QA REQUIREMENTS DEALING WITH CONTROL OF MATERIALS
1024	OI		ABM 12/16/85, 33	P	SENSITIVE
1025	OI		ABM 12/6/85, 33	P	SENSITIVE
1026	RV-P	DCL-84-343	ABM 12/17/84,28	E	PULLMAN INSPECTORS BUYING OFF OVER-OR UNDER-SIZED WELDS
1027	RV		ABM 7/12/84,28	P	PULLMAN'S WELDING PROCEDURES DO NOT FOLLOW AWS CODE
1028	OI		ABM 7/26/85, 33	P	SENSITIVE
1029	RV-P		ABM 7/12/84,28	E	DEALING WITH THE DCN WRITTEN REGARDING UNCONTROLLED TOOLS USED ON STAINLESS STEEL WELDS
1030	NRR		26	R	M-9 SMALL BORE PIPING MANUAL FOR DIABLO CANYON IS NOT SPECIFIC AND IS THE MOST RIDICULOUS DESIGN DOCUMENT (SEE SSER 26, PG E-5)
1031	NRR		26	R	THE BECHTEL M-9 MANUAL DID NOT INCLUDE THE AWS WELD PROCEDURE AND IT WAS STRESSED THAT AWS DID NOT APPLY TO THE PLANT (SEE SSER 26, PG E-5)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1032	RV		ABM 7/12/84,28	E	PERSONNEL IN THE FIELD DID NOT UNDERSTAND AWS WELD SYMBOLS BECAUSE THEY DIDN'T HAVE ANY AWS INFORMATION
1033	RV		ABM 7/12/84,28	E	THE AWS WELDS WERE NOT PREQUALIFIED ON THE PIPE SUPPORTS.THE ANGLES WERE INCORRECT
1034	NRR		26	D	HANGER DESIGNERS TOLD TO CHECK THAT FSAR WAS NOT AFFECTED BY THE DESIGNS WITHOUT KNOWING WHAT IT MEANT (SEE SSER 26, PG E-5)
1035	RV-P	DCL-84-328	ABM 10/24/84,28	E	GROUP LEADERS CHECKED A BOX ON A COVER SHEET THAT WAS ALREADY SIGNED MAKING IT APPEAR THAT THE PERSON PREPARING THE WORK CHECKED THE BOX
1036	RV-P	DCL-84-328	ABM 10/24/84,28	E	BOXES WERE CHECKED ON THE COVERS OF THE PIPE HANGER DESIGNS THAT THEY DID NOT AFFECT THE FSAR WHEN IN FACT THEY DID AFFECT THE SSAR
1037	NRR		28	E	ENGINEERING GROUP PROCEDURES WERE NOT READILY AVAILABLE OR WERE GIVEN ON A DEMAND TYPE BASIS
1038	NRR		26	D	ENGINEERING PROCEDURES WERE INADEQUATE FOR PERFORMING JOB FUNCTION (SEE SSER 26, PG E-5)
1039	NRR		28	D	ENGINEERING GROUP DID NOT RECEIVE ANY TECHNICAL GUIDANCE IN PERFORMING STRESS CALC CONSEQUENTLY ITEMS WERE OMITTED IN THEIR CALCULATIONS; ALSO, NO TRAINING PROGRAM DOCUMENTED
1040	NRR		26	D	EARLY PLANT PROBLEMS AND THE MIRROR IMAGE PROBLEM ARE NOT EXPLAINED OR MADE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					KNOWN TO ENGINEERING GROUP TO PREVENT REPETITION (SEE SSER 26, PG E-5)
1041	NRR		26	R	A DOCUMENT CALLED-FIELD DESIGN ENGINEERING REFERENCE MANUAL-WAS NEVER ISSUED BUT SHOULD HAVE BECAUSE IT CONTAINS A KEY PLAN FOR THE PLANT PLUS OTHER PERTINENT INFORMATION (SEE SSER 26, PG E-5)
1042	NRR		26	D	BECHTEL HAD PERTINENT DESIGN INFORMATION THAT WAS NOT USED AT DIABLO CANYON (SEE SSER 26, PG E-5)
1043	NRR		26	R	OMISSION OF ECCENTRICITIES AND TORSIONAL STRESSES WERE MADE ON STRUDL CALCULATIONS (SEE SSER 26, PG E-5)
1044	NRR		26	D	ENGINEERS NOT WORKING ON CALCULATIONS ARE ASKED TO SIGN THEM OFF (SEE SSER 26, PG E-5)
1045	NRR		26	D	A SPECIFIC HANGER WOULD FAIL THE WAY IT WAS DESIGNED UNDER ANY APPLICABLE ANALYSIS.ONLY WAY TO PASS WAS TO ASSUME A WIDE FLANGE CONNECTED TO A PLATE (SEE SSER 26, PG E-5)
1046	NRR		26	R	STRESS WALKDOWNS DON'T INCLUDE THE GAPS AT THE SUPPORT (SEE SSER 26, PG E-5)
1047	NRR		26	R	AN 8" DRAIN LINE WHICH WAS NONSAFETY RELATED WAS ROUTED IN CONTACT WITH CONTROL ROD DRIVE LINES. IF THESE DRAIN LINES WERE TO FALL, A WHOLE BUNDLE OF CRD LINES WOULD BE TAKEN OUT (SEE SSER 26, PG E-5)

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1048	NRR		26	D	SEISMIC CALCS ROUNDED OFF SO MUCH THAT ERRORS COMPOUND (SEE SSER 26, PG E-5)
1049	NRR		26	D	CHECKERS JUST SIGN CALC LOAD SHEETS TO MAKE PAPER WORK LOOK GOOD (SEE SSER 26, PG E-5)
1050	NRR		26	D	QA PERSONNEL ARE RIGHT OUT OF SCHOOL AND HAVE NO KNOWLEDGE OF HOW TO CHECK CALCS (SEE SSER 26, PG E-5)
1051	OI		ABM 2/26/86,33	P	SENSITIVE
1052	NRR		26	D	IN QUICK-FIX, THE MAIN THING WAS TO GET THE QUICK FIX FORMS SIGNED BY THE RIGHT PEOPLE, NOT ON HOW TO CORRECT ENGINEERING PROBLEMS
1053	NRR		26	D	MANY IN SNUBBER GROUP DIDN'T EVEN KNOW HOW TO ACCOUNT FOR THE MOVEMENTS THAT SNUBBERS ARE TO ACCOUNT FOR BECAUSE THERE IS NO PROCEDURE ON HOW TO DO THIS ANALYSIS (SEE SSER 26, PG E-5)
1054	RV		ABM 10/10/84,28	E	NIGHT CREW AND DAY CREW WELDERS REWORK EACH OTHERS WORK WHICH RESULTED IN POOR WORK
1055	RV-P	DCL-84-343	ABM 12/17/84,28	E	ANCHOR BOLT DRILLED HOLES WERE NOT CHECKED IN ACCORDANCE WITH ESD 223
1056	NRR		26	R	SMALL BORE LINES EXITING THE CONTAINMENT A LOT OF TIMES DID NOT HAVE ENOUGH OFFSET TO FLEX WITHOUT BEING OVERSTRESSED.SIMILAR PROBLEM WITH LARGE BORE LINES (SEE SSER 26, PG E-5)
1057	NRR		26	R	ANY PIPE GOING THROUGH BUILDINGS WOULD SEE NO DISPLACEMENT OR STRESS IS NOT

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					TRUE--ITS UNFOUNDED ENGINEERING (SEE SSER 26, PG E-5)
1058	NRR		26	D	MANY WERE ALLEGATIONS OF WRONGDOING IN SMALL BORE, LARGE BORE, QUICK FIX AND QA RELATED PROBLEMS.ALL THESE ARE SIMILAR TO PREVIOUS DISCUSSIONS (SEE SSER 26, PG E-5)
1059	RV		ABM 7/12/84,28	E	QC INSPECTORS WEREN'T QUALIFIED TO DO INSPECTING.THEY WERE LEVEL I (FOLEY)
1060	OI		ABM 12/6/85, 33	P	SENSITIVE
1061	RV-P	DCL-84-343	ABM 12/17/84,28	E	FOLEY 81/82--INSPECTOR TOLD NOT TO RED TAG A LOOSE BEAM CLAMP AFTER IT HAD BEEN ACCEPTED BY FOLEY QA AND PG&E BECAUSE HE COULD BE OUT OF A JOB IF HE DID
1062	RV-C		85-27, 33	E	FOLEY 82--INSPECTOR DISAGREES WITH RESULTS OF PTGC/PG&E REPORT ISSUED BY D A ROCKWELL ON BEAM CLAMPS INSTALLATION EVALUATION, ABOUT WHETHER THE TOE OF THE CLAMP IS MAKING CONTACT WITH FLANGES
1063	NRR	DCL-84-166	26	R	M-9 COMPUTER ANALYSIS FOR ANGLES OMITTED THE RELEVANT PROVISION OF AISC CODE FOR ALLOWABLE BENDING STRESS (SEE SSER 26, PG E-5)
1064	NRR	DCL-84-166	26	D	MANAGEMENT DID NOT FREELY DISTRIBUTE PROFESSIONAL CODES THAT SUPPOSEDLY PARALLED COMPUTER ANALYSES RELIED ON BY ENGINEERS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
1065	NRR	DCL-84-166	26	D	ENGINEERS MAKING SEISMIC CALCULATIONS WERE TOLD TO MAKE ASSUMPTIONS CONTRARY

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					TO FACT, i.e ASSUME RESTRAINTS THAT DID NOT EXIST (SEE SSER 26, PG E-5)
1066	NRR	DCL-84-166	26	D	OUT OF DATE STRUDL MANUALS WERE ISSUED TO ENGINEERS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
1067	NRR	DCL-84-166	26	D	ENGINEERS IN STRESS GROUP RELIED ON OUTDATED SEISMIC DATA THAT WAS NECESSARY FOR THEIR CALCULATIONS (SEE SSER 26, PG E-5)
1068	NRR	DCL-84-166	26	D	COMPUTER PROGRAM DID NOT HAVE ADEQUATE MEMORY TO CONDUCT FULL ANALYSIS OF COMPLEX HANGERS (SEE SSER 26, PG E-5)
1069	NRR	DCL-84-166	26	D	NO PROCEDURE OR CRITERION TO GUIDE ENGINEERS WHO CHECKED CALCULATIONS IN THE SEISMIC DESIGN REVIEW (SEE SSER 26, PG E-5)
1070	NRR	DCL-84-166	26	D	MANAGEMENT DIRECTED PURGE OF FILES TO REMOVE EVIDENCE OF DESTROYED OR CENSORED WORK BY ENGINEERS WHO FAILED HANGERS (SEE SSER 26, PG E-5)
1071	NRR	DCL-84-166	26	D	WHEN ASSUMPTIONS OR LOADS WERE CHANGED FOR PRELIMINARY CALCULATIONS ON PIPE SUPPORTS THAT PREVIOSLY FAILED, NO ONE REDID OR CHECKED THE ENTIRE CALCULATION (SEE SSER 26, PG E-5)
1072	NRR	DCL-84-166	26	D	SEISMIC REVIEW CALCULATIONS FOR PIPE SUPPORTS WERE REVIEWED AND APPROVED "EN-MASSE" BY BECHTEL OFFICIAL (SEE SSER 26, PG E-5)
1073	NRR	DCL-84-166	26	R	MANAGEMENT DID NOT HAVE NECESSARY DOCUMENTS FROM VENDORS AND MANUFACTURERS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					TO QUIDE CALCULATIONS ON SUPPORTS (SEE SSER 26, PG E-5)
1074	NRR	DCL-84-166	26	D	MANAGEMENT DID NOT SEND DRAWING DETAILS AND SUPPORT CONDITIONS TO VALVE MANUFACTURERS AND OTHER VENDORS FOR APPROVAL (SEE SSER 26, PG E-5)
1075	NRR	DCL-84-166	26	D	MANAGEMENT'S PRODUCTION SCHEDULE FOR THE SEISMIC DESIGN REVIEW MADE IT IMPOSSIBLE FOR ENGINEERS TO THINK CLEARLY (SEE SSER 26, PG E-5)
1076	NRR	DCL-84-166	26	D	ENGINEERS APPROVED HANGERS SOLELY ON THE BASIS OF CONCLUSIONS FOR SIMILAR PIPE SUPPORTS WITHOUT ANY INDEPENDENT EVALUATION (SEE SSER 26, PG E-5)
1077	NRR	DCL-84-166	26	D	MANAGEMENT INSTRUCTED ENGINEERS TO BLINDLY CHECK ON REVIEW FORM THAT CALCULATION RESULTS WOULD NOT AFFECT THE FSAR (SEE SSER 26, PG E-5)
1078	NRR	DCL-84-166	26	D	CALCULATIONS THAT CALLED FOR FIELD MODIFICATIONS WERE ALTERED AFTER COMPLAINTS FROM CONSTRUCTION (SEE SSER 26, PG E-5)
1079	NRR	DCL-84-166	26	D	MULTIPLE ENGINEERS INDEPENDENTLY PRODUCED PRELIMINARY CALCULATIONS ON SAME HANGERS GIVING MANAGEMENT THE OPTION TO THROW OUT CALCULATIONS THAT FAILED AND KEEP THOSE THAT PASSED (SEE SSER 26, PG E-5)
1080	NRR		26	D	MANAGEMENT OVERRULED ENGINEERS WHO ATTEMPTED TO CALCULATE AFFECTS AND STRESSES OF TENSIONS LOAD CREATED DURING INSTALLATION (SEE SSER 26, PG E-5)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1081	NRR	DCL-84-166/187	26	D	ENGINEERS ONSITE COULD NOT OBTAIN INFORMATION FROM SAN FRANCISCO OFFICE IN A TIMELY MANNER (SEE SSER 26, PG E-5)
1082	NRR	DCL-84-166	26	D	NO SYSTEM EXISTED TO VERIFY ACCURACY OF DESIGN INFORMATION RECEIVED BY PHONE FROM SAN FRANCISCO OFFICES (SEE SSER 26, PG E-5)
1083	NRR		26	D	HANGER CALCULATIONS COVERED BY SEISMIC DESIGN REVIEW ARE UNACCEPTABLE DUE TO INADEQUATE UNDERLYING DOCUMENTATION (SEE SSER 26, PG E-5)
1084	RV		84-11,26	E	PLANT OPERATORS DID NOT HAVE ACCESS TO A CENTRALIZED DOCUMENT CENTER WITH INFORMATION NECESSARY TO RESPOND TO PLANT CONDITIONS
1085	NRR	DCL-84-1[illegible]	26	D	CALCULATIONS THAT REPLACED THOSE REJECTING PIPE SUPPORTS WERE LESS SOPHISTICATED (SEE SSER 26, PG E-5)
1086	OI			P	SENSITIVE
1087	NRR	DCL-84-166	26	R	ENGINEERS IN THE SEISMIC DESIGN REVIEW DID NOT HAVE WRITTEN PROCEDURES TO GUIDE THEIR USE OF THE STRUDL COMPUTER PROGRAM (SEE SSER 26, PG E-5)
1088	NRR	DCL-84-166	26	R	M-9 COMPUTER ANALYSIS INCORRECTLY INSTRUCTED ENGINEERS TO CONSIDER SMALL BORE BASE PLATES AND PIPING LINES AS RIGID (SEE SSER 26, PG E-5)
1089	RV		ABM 7/12/84,28	P	FOLEY COMPANY PROVIDED INADEQUATE TRAINING TO TAKE CREDIT FOR COMPLYING WITH ANSI STANDARDS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1090	RV-P	DCL-84-328	ABM 10/24/84,28	E	CONDUCTED INSPECTIONS WITHOUT LEVEL I OR LEVEL II CERTIFICATION
1091	RV		ABM 10/10/84,28	P	A LOT OF TIMES PROCEDURES CALL OUT FOR A CERTAIN THING THAT CAN'T BE DONE
1092	NRR		28	R	NOT ALL LOADS ARE CONSIDERED IN THE CALCULATION OF SMALL BORE PIPE SUPPORT ANALYSIS (SEE SSER 26, PG E-5)
1093	RV		ABM 10/24/84,28	P	MATERIAL FALSE STATEMENT PG&E STATED THAT PIPE SUPPORTS AND RUPTURE RESTRAINTS QA IAW ASME SECT 3 1971 IS CONSISTENT WITH 10CFR50 APPENDIX B
1094	RV-P		ABM 7/12/84,28	P	PULLMAN QA PROGRAM FOR PIPE SUPPORTS AND RUPTURE RESTRAINTS DID NOT MEET 10CFR50 APPENDIX B REQUIREMENTS, BUILT TO ASME SECT 3 1971 QA PROGRAM WHICH DEALT ONLY WITH PIPING
1095	RV		ABM 10/24/84,28	P	MATERIAL FALSE STATEMENT BY OMISSION CONCERNING PULLMAN AND PG&E RESPONSE TO NSC AUDIT FINDING 3 OF CRITERION 9 REGARDING INSPECTOR NDE PERSONNEL QUALIFICATIONS
1096	OI		ABM 11/14/85, 33	P	SENSITIVE
1097	OI		ABM 8/1/85, 33	E	SENSITIVE
1098	RV		ABM 10/24/84,28	P	MATERIAL FALSE STATEMENT PG&E LTR DCL-84-82 RESP TO SSER 21 STATES THAT ESD 237 WAS MODIFIED IN 1982 TO REQUIRE FULL COMPLIANCE WITH ANSI N45 2.6, ALSO CONTRACT 8711 WAS MODIFIED SIMILARLY-NOT TRUE

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1099	RV-P		ABM 7/12/84,28	P	NEW INSPECTORS WERE INITIALLY CERTIFIED AS LEVEL II WITHOUT SPENDING CODE REQUIRED TIME AS LEVEL I (NDE)
1100	RV		ABM 10/24/84,28	P	PPP DID NOT SEARCH FOR RECORDS TO VERIFY TRAINING AND EXPERIENCED LEVELS OF INSPECTORS.MFS THAT ALL NDE PERSONNEL HAD REQUIRED BACKGROUND TO BE LEVEL II
1101	RV-R		85-01,33	E	FALSIFICATION OF RECORDS-LEVEL II MT INSPECTOR RESTRICTIONS WAIVED BY BACKDATED SIGNATURE OF A LEVEL III WHO WAS NO LONGER ON SITE
1102	RV		ABM 7/12/84,28	E	POSSIBLE CONFLICT OF INTEREST IN EARLY YEARS OF CONSTRUCTION WHEN QA/QC INSPECTORS WERE ALSO ENGINEERS
1103	RV		ABM 7/12/84,28	E	90 DAY WELDERS LOG SHOWS FOUR INSTANCES OF UNCONTROLLED WELDING
1104	RV-P		ABM 7/12/84,28	P	PULLMAN'S ENTIRE QA PROGRAM WAS NEVER EVALUATED; PULLMAN DID NOT CONDUCT AUDITS IAW ASME OR 10CFR50 APPENDIX B
1105	RV		ABM 7/12/84,28	E	PTGC P&ID WERE NOT BEING UPDATED AS DCN'S WERE ISSUED AND WERE NOT BEING REVISED WHILE SYSTEMS WERE BEING INSPECTED FOR COMPLETION
1106	RV		ABM 7/12/84,28	E	PTGC P&ID'S DO NOT SHOW THE INSTALLED CONDITION FOR THE CONDENSATE AND MAIN STEAM SYSTEM
1107	RV		ABM 7/12/84,28	E	PTGC DISCREPANCY BETWEEN OVID'S AND P&ID'S
1108	RV		ABM 7/26/85, 33	P	PTGC-DURING SYSTEM TESTINGS THERE WERE SOME NICE PLAYING WITH FIGURES TO BE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					ABLE TO MAKE THE THING LOOK LIKE IT IS WORKING
1109	RV		ABM 3/13/86,33	E	PJGC-OVID DOES NOT INDICATE THE VALVE NUMBER THAT SHOULD BE SECURED IF YOU GET A BREAK IN A SITE GLASS OR OTHER EQUIPMENT FAILURE
1110	RV		ABM 10/24/84,28	E	PTGC-A GENERIC PROBLEM WAS LACK OF PROCEDURES TO WORK BY, WRITTEN PROCEDURES-SOME TIMES HAD ONLY MEMO'S OR GUIDELINE, WHICH WERE SUBJECT TO INTERPRETATION
1111	RV-P		ABM 7/12/84,28	E	PTGC MAJORITY OF INDIVIDUALS THAT WERE TO VERIFY ACCEPTABLE WELD SIZE WITH FILLET WELD GAUGES WERE NOT TRAINED IN HOW TO USE THEM
1112	RV		ABM 10/24/84,28	E	B31-1 AND B31-7 DO NOT ADDRESS "EFFECTIVE THROAT" FOR WELDS NOR DO THESE CODES GIVE SYMBOLS
1113	RV		ABM 10/24/84,28	E	PIPE SUPPORTS DRAWINGS TO BE USED IN THE FIELD USED SYMBOLS AND NOT JOINT DETAILS AND DID NOT SHOW WELD EFFECTIVE THROAT
1114	RV		ABM 10/24/84,28	E	LACK OF WELD SYMBOL STANDARDS MAKE IT IMPOSSIBLE TO DETERMINE THE AS BUILT CONDITION OF WELDS IN THE PLANT
1115	RV		ABM 10/24/84,28	E	PG&E STATES THAT THE WELD SYMBOLS USED AT DIABLO CANYON ARE CONSISTENT WITH THE STANDARDS SPECIFIED IN AWS D11 SECTION 2.4 HOWEVER THAT SECTION HAS NOTHING TO DO WITH WELD SYMBOLS
1116	RV		84-36,28	E	PG&E STATES IF MISINTERPRETATION CONCERNING WELD SYMBOLS OCCURRED, THEY

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CONDUCTED MEETINGS OR CLARIFIED PROCEDURES. ALLEGER KNOWS OF NO TIME THIS TOOK PLACE
1117	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E HAS THE ATTITUDE THAT IF IT CAN BE INSTALLED, DO IT EVEN IF IT MIGHT BE WRONG. FOR EXAMPLE, 1/2 INCH FILLET WELD ON SCHEDULE 10 PIPE ON 3 SIDES ON A LUG ATTACHMENT
1118	RV		84-36,28	P	PG&E STATES POTENTIAL WELD REQUIREMENT MISINTERPRETATIONS WERE ACCOUNTED FOR IN THE DESIGN PROCESS WHICH ALLEGER FEELS IS LUDICROUS
1119	RV-P	DCL-85-077	ABM 3/26/85,28	E	HANGER 58N-4R HAS TUBE STEEL WELDED TOGETHER WITH QUARTER INCH FILLET CAPS ON BOTH SIDES
1120	NRR		26/28	E	BOLTS WERE EMBEDDED A MINIMUM OF 10.5 INCHES INTO CONCRETE THAT WAS ONLY 12 INCHES THICK (SEE SSER 26, PG E-10)
1121	NRR		26/28	E	MANAGEMENT RESPONSE TO PROBLEMS ON THE USE OF "THRU-BOLTS" WAS NEVER ADDRESSED (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1122	NRR		26/28	E	CONCRETE CONES "POPPED OUT" BENEATH THREE ANCHOR BOLTS AND AN ENGINEER MISTAKENLY STATED THIS WOULD NOT EFFECT STRUCTURAL INTEGRITY (SEE SSER 26, PG E-10)
1123	NRR		26/28	E	"DRY PACKING" REPAIR TECHNIQUE FOR VOIDS LEFT WHEN CONCRETE CONES "POPPED OUT" WAS AN INEFFECTIVE TECHNIQUE.DCN ON THIS ISSUE WAS NOT RESOLVED (SEE SSER 26, PG E-10 AND ALLEGATION 1122 IN SSER 28)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1124	NRR		26/28	E	THERE WAS NO DESIGN CONSIDERATION GIVEN TO THE STRUCTURAL EFFECTS WHEN HILTI EMBEDDED TOO CLOSE TO EACH OTHER FROM OPPOSITE SIDES OF THE CONCRETE (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1125	NRR		26/28	E	SPECIFIC INFORMATION ON MINIMUM EMBEDMENT ON QUICK FIX SHEETS WAS FACTORED OUT OF THE AS-BUILT REVIEWS (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1126	NRR		28	U	RHR RECIRC VALVE 5/8" STUDS WERE NOT REPLACED AFTER DCN WAS WRITTEN ON THE PROBLEM
1127	NRR	DCL-84-243	26/33	R	EQ SAFETY RELATED VALVE MAINTENANCE WAS PERFORMED WITHOUT THE USE OF CONTROLLED PROCEDURES WHICH RESULTED IN VALVE DAMAGE AND PERSONNEL DISCHARGE AND IT WAS NOT REPORTED (SEE SSER 26, PG E-5)
1128	NRR	DCL-84-243	26/33	R	MVR 1845 DID NOT INCLUDE A LISTING OF "WHAT DAMAGED PARTS WERE REPAIRED OR HOW THEY WERE REPAIRED" (SEE SSER 26, PG E-5)
1129	NRR	DCL-84-243	26/33	R	FCV-641A INSTALLATION AND OTHERS WERE INSTALLED IN VIOLATION OF EQ REQUIREMENTS.A NUMBER OF THESE MAY HAVE GONE UNREPORTED, AN INDICATION OF A TRAINING PROGRAM WEAKNESS (SEE SSER 26, PG E-5)
1130	OIA		ABM 1/7/86, 33	P	THREE INDIVIDUALS HAVE BEEN LAID OFF OR SUFFERED HARASSMENT ON-SITE SINCE THE OCCURRENCE OF UNAUTHORIZED DISCLOSURES BY NRC STAFF

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1131	NRR	DCL-84-239	33	E	NRC SHOULD EVALUATE PG&E'S IMPLEMENTATION OF CORRECTIVE ACTION REGARDING TRAINING AND NOTIFICATION OF PROCEDURE REVISIONS
1132	NRR	DCL-84-239	33	E	PG&E RESPONSE CONTINUES TO IGNORE CAUSE OF THE PROBLEM IN ITS RESPONSE
1133	NRR	DCL-84-239	28	E	FALSE STATEMENT IN PG&E RESPONSE THAT EVALUATION AND RESOLUTION OF AUDIT FINDINGS HAVE NO SIGNIFICANCE FOR COMMERCIAL OPERATION
1134	NRR	DCL-84-239	28	E	MISLEADING STATEMENT BY PG&E REGARDING USE OF UNCONTROLLED COPIES OF MANUALS IN VIOLATION OF 10 CFR 50 APP. B
1135	NRR	DCL-84-239	26	D	PG&E ASSERTION OF SUFFUCIENT NUMBER OF CONTROLLED PROCEDURES FOR USE BY OPEG ENGINEERS VIOLATES ACCEPTED INDUSTRY PRACTICE IN COMPLIANCE WITH 10 CFR 50 APP B CRIT VI (SEE SSER 26, PG E-5)
1136	NRR	DCL-84-239	26	R	PG&E CONTENTION THAT NORMAL ENGINEERING PRACTICE DOES NOT SPECIFY IN THE DESIGN PROCEDURES THE LIMITING CONDITIONS FOR THE USE OF THERMAL GAPS IS FALSE (SEE SSER 26, PG E-5)
1137	NRR	DCL-84-239	26	R	FALSE STATEMENT:REANALYSIS OF PIPE STRESS WITHOUT USE OF THERMAL GAPS RESULTS IN ALL PIPING, SUPPORTS, AND EQUIPMENT REMAINING QUALIFIED (SEE SSER 26, PG E-5)
1138	NRR	DCL-84-239	26	R	PG&E FALSE STATEMENT IMPLIES JOINT RELEASES HAVE BEEN COMMONLY APPLIED IN THE INDUSTRY AS USED AT DIABLO CANYON (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1139	NRR	DCL-84-239	26	D	WALKDOWNS FOR 79-14 REQUIREMENT SHOULD BE REPERFORMED SINCE EXTENSIVE MODIFICATIONS HAVE BEEN MADE (SEE SSER 26, PG E-5)
1140	NRR	DCL-84-239	26	D	PG&E FALSE STATEMENT:LACK OF TRAINING & DESIGN REFERENCES PREVENTS PSTDC ENGINEERS FROM PROPER RESOLUTION OF CONSTRUCTION PROBLEMS REQUIRING ENGINEERING JUDGEMENT (SEE SSER 26, PG E-5)
1141	NRR	DCL-84-239	26	D	PSTDCS WERE NOT PART OF THE AS BUILT REVIEW AS CLAIMED BY PG&E (SEE SSER 26, PG E-5)
1142	OI	DCL-84-239		P	SENSITIVE
1143	NRR	DCL-84-239	28	E	FALSE STATEMENT BY PG&E REGARDING APPLICABILITY OF MEMO DIRECTING PSTDC MONITORING OF PROPER DCN PREPARATION
1144	NRR	DCL-84-239	26	D	DCN/DR'S DISPOSITIONED WITH QUICK FIXES SHOULD BE REOPENED TO RECEIVE CORRECT ENGINEERING REVIEW (SEE SSER 26, PG E-5)
1145	RV-P	DCL-84-239	ABM 7/26/84,28	P	PG&E FALSE STATEMENT REGARDING COMPLIANCE WITH AUDITING REQUIREMENTS OF APPLICABLE REG. GUIDES
1146	NRR	DCL-84-239	28	E	10 CFR 50 APPENDIX B REQUIREMENT FOR TECHNICAL QA AUDITS
1147	RV	DCL-84-239	ABM 7/12/84,28	E	DEFECTIVE TUBING USED IN CLASS 1 PIPE SUPPORTS SAMPLE INDICATES CORNER RADII LESS THAN 2T AND LAMINAR CRACKING

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1148	RV-P	DCL-84-239	ABM 7/26/84,28	E	DEFECTIVE MATERIAL USED IN SPHERICAL BEARINGS FOR SOME STRUTS AND SNUBBERS IN CLASS I SYSTEMS CRACKED DUE TO SWAGEING
1149	OI	DCL-84-239	ABM 7/12/84,28	P	SENSITIVE - THE TECHNICAL ISSUES WERE ADDRESSED AND RESOLVED IN A DUPLICATE ALLEGATION (91) AND CLOSED IN SSER-21.
1150	NRR	DCL-84-239	26	D	PAGES 6 THRU 10 ADDRESS VARIOUS EXAMPLES OF INCOMPLETE AS-BUILT DRAWINGS USED FOR ENGINEERING CALCULATIONS (SEE SSER 26, PG E-5)
1151	NRR	DCL-84-239	26	D	PAGES 10 THRU 13 ADDRESS INCOMPLETE PG&E RESPONSE REGARDING LOAD DETERMINATION USED IN PIPE ANALYSES (SEE SSER 26, PG E-5)
1152	NRR	DCL-84-239	26	D	DETAILS OF STRUDL MODEL REQUIRED TO INSURE CONSISTENT ANALYSES HAVE NOT BEEN ADDRESSED PAGES 13 THRU 15 (SEE SSER 26, PG E-5)
1153	NRR	DCL-84-239	26	D	STRUDL STRESS SUMMARIES NOT ADEQUATELY COVERED IN CURRENT CORRECTIVE ACTION PLAN, PAGES 15 THRU 17 (SEE SSER 26, PG E-5)
1154	NRR		26	R	RIDICULOUS INCOMPETENT PG&E RESPONSES REGARDING WARPING STRESS IN THE PIPE SUPPORT DESIGN, PAGES 17 THRU 18 (SEE SSER 26, PG E-5)
1155	NRR	DCL-84-239	26	R	AUSTRALIAN DATA IS NOT APPLICABLE FOR TYPE OF LOADING USED IN PG&E ANALYSIS OF ANGLE MEMBERS, PAGES 18-20 (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1156	NRR		26	D	FALSE STATEMENT REGARDING NUMBER OF PIPE SUPPORTS ADDRESSED IN DR (SEE SSER 26, PG E-5)
1157	NRR	DCL-84-239	26	D	SEVERAL ADDITIONAL CONCERNS REGARDING BASE PLATE CALCULATIONS WERE NOT ADDRESSED IN PG&E RESPONSE (SEE SSER 26, PG E-5)
1158	RV	DCL-84-239	ABM 7/12/84,28	E	PULLMAN QC MANAGER COVERED UP DEFECTIVE INSTALLATION OF A-307 BOLTS
1159	RV-P	DCL-84-239	ABM 7/26/84,28	P	FALSE STATEMENT BY PG&E REGARDING ADEQUACY OF WELD PROCEDURES
1160	RV-P	DCL-84-239	ABM 7/26/84,28	P	PG&E HAS TAKEN AUTHORITY RESERVED TO AWS BY AWS FOR DETERMINING PRE-QUALIFIED STATUS AND GIVEN IT TO THEMSELVES
1161	RV-P	DCL-84-239	ABM 7/26/84,28	P	FALSE STATEMENTS REGARDING WELD PROCEDURES EXCEEDING AWS CODE REQUIREMENTS
1162	RV-P	DCL-84-239	ABM 7/26/84,28	P	FALSE STATEMENT:BECHTEL METALLURGIST CONTRADICTS HIMSELF REGARDING SCOPE OF REINSPECTION OF RUPTURE RESTRAINTS
1163	RV-P	DCL-84-239	ABM 7/26/84,28	E	PULLMAN DID NOT PERFORM A DOCUMENTED INSPECTION OF ALL BOLTED AND WELDED CONNECTIONS CONTRARY TO THE RESOLUTION OF NCR
1164	RV-P	DCL-84-239	ABM 7/26/84,28	P	PG&E ENGINEER INSTRUCTS PULLMAN TO DEVIATE FROM AWS REQUIREMENTS
1165	RV-P	DCL-84-239	ABM 7/26/84,28	P	QC INSPECTOR WAS TOLD NOT TO INSPECT OTHER CONTRACTORS WORK WHEN HE INFORMED HIS MANAGEMENT OF OBSERVED DEFECTIVE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WELDS NOR WAS IT SUGGESTED THAT HE WRITE A DR
1166	NRR	DCL-84-239	33	U	FALSE STATEMENT BY PG&E V.P. REGARDING ADEQUACY OF RESOLUTION OF OVERSIZED BOLT HOLE CONCERNS IN RUPTURE RESTRAINTS
1167	RV-P	DCL-84-239	ABM 7/26/84,28	E	FALSE STATEMENTS MADE REGARDING RUPTURE RESTRAINT WELDING CONTRACT REQUIREMENTS FOR ARGON GAS FLOW RATE DURING GTAW WELDING
1168	RV-P	DCL-84-239	ABM 7/26/84,28	E	FALSE STATEMENT REGARDING QA MANAGEMENT RESPONSE UPON NOTIFICATION OF CONTRACT VIOLATION REGARDING WELDING EQUIPMENT SPECIFICATIONS
1169	RV-P	DCL-84-256	ABM 7/26/84,28	P	NO INITIAL QA PROGRAM FOR RUPTURE RESTRAINTS AND PIPE SUPPORT CONTRACTS BETWEEN 1971 AND 1973 QA AUDIT OCTOBER 73
1170	RV-P	DCL-84-256	ABM 7/26/84,28	E	QA AUDIT OCT 73 DID NOT AUDIT RUPTURE RESTRAINTS AGAINST CORRECT SPECIFICATION SPEC 8833XR BUT AGAINST SPEC 8711 WHICH COVERS PIPE SUPPORTS
1171	RV-P	DCL-84-256	ABM 7/26/84,28	P	ESD223 DID NOT MEET ALL REQUIREMENTS OF PULLMAN QA MANUAL SECTION 4, DOC REVIEW/CONTROL QUAL SPECIAL PROCESSES AND PERSONNEL WORK PROC CONTROL NCR INSPEC TEST RECORDS AND PLANS
1172	RV-P	DCL-84-256	ABM 7/26/84,28	E	OTHER AUDITED ITEMS RECEIPT STORAGE AND INSTALLATION PIPE HANGERS AND RUPTURE RESTRAINTS
1173	RV-P	DCL-84-256	ABM 7/26/84,28	E	RESIDENT MECHANICAL ENGINEERS SURVEILLANCE SYS OF THE FABRICATING,

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					FURNISHING, AND INSTALLING OF PIPE HANGERS AND RUPTURE RESTRAINTS
1174	RV-P	DCL-84-256	ABM 7/26/84,28	E	QA/QC MANAGER MAY HAVE FALSIFIED QA PERSONNEL CERTIFICATION RECORDS
1175	RV-P	DCL-84-256	ABM 7/26/84,28	E	LICENSEE DID NOT REVISE CS#8711 OR CS#8833XR TO COMPLY WITH REG GUIDE 1.29 PLUS DISCOVERY OF HOSGRI
1176	RV-P	DCL-84-256	ABM 7/26/84,28	E	NO PREHEAT CHECK BY QA OF RUPTURE RESTRAINT WELDING
1177	RV-P	DCL-84-256	ABM 7/26/84,28	E	DEFICIENCIES FOUND DURING AUDITS MAR 27, 74 AND MAY 13, 74 USE OF N/A ON INSPECTION HOLD POINTS AND DAILY INSPECTION LOG LACK DATES
1178	RV-P	DCL-84-256	ABM 7/26/84,28	E	INSPECTOR'S GIVEN PRIMARY RESPONSIBILITY TO CONTROL DRAWINGS FOR RUPTURE RESTRAINTS
1179	RV-P	DCL-84-256	ABM 7/26/84,28	E	REVISIONS TO ESD 243 NOT FULLY IMPLEMENTED ON WELDING PROCESS SHEETS
1180	RV-P	DCL-84-256	ABM 7/12/84,28	E	QC INSPECTORS REQUIRED TO PERFORM ENGINEERING FUNCTIONS
1181	RV	DCL-84-256	ABM 7/12/84,28	E	WELD IDENTIFICATION ON RUPTURE RESTRAINTS INCONSISTENT
1182	RV-P	DCL-84-256	ABM 7/26/84,28	E	PREHEAT AND INTERPASS TEMPERATURE OF ALL CLASS I WELDS WAS NOT MONITORED FOR COMPLIANCE TO WELD PROCEDURES,ETC.
1183	RV	DCL-84-256	ABM 7/26/84,28	U	UT EXAMINATION PROCEDURES NOT IN COMPLIANCE WITH CONTRACT SPECIFICATION

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1184	RV-P	DCL-84-256	ABM 7/12/84,28	P	PULLMAN PIPE SUPPORT AND PIPE RUPTURE RESTRAINT QA PROGRAMS NOT BASED ON NATIONAL CODE OR STANDARDS
1185	RV-P	DCL-84-256	ABM 7/12/84,28	E	PULLMAN AUDITS PERFORMED IN 1978 TO VERIFY UNIT 2 HARDWARE DID NOT EFFECTIVELY EVALUATE QUALITY OF WORK
1186	RV-P	DCL-84-256	ABM 7/26/84,28	U	UNIT I FINAL WALKDOWN INSPECTIONS NOT PERFORMED IN COMPLIANCE WITH PROCEDURES
1187	RV-P	DCL-84-256	ABM 7/26/84,28	E	TORQUE WRENCHES USED IN RUPTURE RESTRAINT BOLTING NOT CALIBRATED
1188	RV	DCL-84-256	ABM 7/12/84,28	P	WELD CODE 7/8 NOT PROPERLY APPLIED TO RUPTURE RESTRAINT WELDING UNAUTHORIZED WELD JOINT CONFIGURATION USED
1189	RV-R	DCL-84-239	84-27,28	E	SUBSTANDARD MATERIAL USED IN PIPE SUPPORTS
1190	RV-P	DCL-84-239	ABM 7/26/84,28	E	FAILURE TO REVIEW AS BUILT DRAWINGS
1191	OI	DCL-84-239, 85-212	ABM 8/6/85, 33	P	SENSITIVE
1192	OI	DCL-84-239, 85-212	ABM 8/6/85, 33	P	SENSITIVE
1193	OI	DCL-84-239, 85-212	ABM 8/6/85, 33	P	SENSITIVE
1194	OI	DCL-84-239, 85-212	ABM 8/6/85, 33	P	SENSITIVE
1195	NRR		26/28	E	DUE TO HIGH CARBON CONTENT IN SS LINES IGSCC COULD OCCUR
1196	NRR		26/28	E	1973 REG GUIDE 1.44 CALLED FOR INTERGRANULAR CORROSION TESTING OF SS WITH CARBON GREATER THAN .03%. PG&E HAS NOT COMPLIED WITH THIS REQUIREMENT (SEE ALLEGATION 1195)

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1197	NRR		26/28	E	BECAUSE PULLMAN PROCEDURES FAILED TO ADEQUATELY CONTROL HEAT INPUT AND INTERPASS TEMPERATURES, IGSCC COULD OCCUR IN THE WELDS (SEE ALLEGATION 1195)
1198	OI		ABM 3/13/86,33	P	SENSITIVE
1199	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E MADE A FALSE STATEMENT WHEN THEY STATED THAT 304H HAS NOT BEEN USED AT DIABLO, A LETTER DATED 2/10/84 INFERS THAT 304H WAS USED FOR PIPING
1200	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E MADE A FALSE STATEMENT WHEN THEY STATED THAT ASME IS THE REQUIREMENT FOR WELDED STUDS ON THE CONTAINMENT LINER, ESD272 REFERENCES AWS
1201	RV-P	DCL-84-343	ABM 12/17/84,28	P	WELDING OF A307 STUDS TO THE CONTAINMENT LINER REQUIRES REQUALIFICATION OF THE PROCEDURE BECAUSE A307 BOLTING MATERIAL IS NOT A "P1" MATERIAL
1202	RV-P	DCL-84-328	ABM 10/24/84,28	E	PG&E MADE A FALSE STATEMENT WHEN THEY STATED THAT QA PROGRAM REMAINS IN EFFECT "FOR ALL WELDS", WHEN A 12/28/83 PROCEDURE CHANGE TELLS INSPECTORS NOT TO WRITE-UP REPORTS ON EXISTING WELDS
1203	NRR		28	E	PG&E MADE A FALSE STATEMENT WHEN THEY STATE THAT RESIDUAL STRESSES ARE SELF-RELIEVING BECAUSE THIS IS THE VERY PURPOSE FOR POST-WELD HEAT TREATMENT (PWHT)
1204	NRR		28	E	PG&E MADE A MISLEADING STATEMENT WHEN THEY STATED THAT "SUPPORTS ARE GENERALLY NOT HIGHLY RESTRAINED", THERE NUMEROUS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CASES OF HIGHLY RESTRAINED WELDS (SEE ALLEGATION 1203)
1205	RV-P	DCL-84-328	ABM 10/24/84,28	E	PULLMAN QA MANAGEMENT PARTIALLY VOIDED DISCREPANCY REPORTS BY REWRITING IT. THE REPORT SHOULD BE ANSWERED ON THE RECORD, NOT CENSORED
1206	RV-P	DCL-84-328	ABM 10/24/84,28	U	A PULLMAN MEMO DATED 5/31/84 CONFIRMS THAT WELDING OF A307 BOLTS IS UNACCEPTABLE, THEREFORE, ALL WELDED STUDS INSTALLED IN THE LAST 14 YEARS MUST BE REPLACED
1207	RV-P	DCL-84-328	ABM 10/24/84,28	U	PULLMAN MANAGEMENT TRIED TO PREVENT DISTRIBUTION OF THE 5/31/84 MEMO
1208	RV-P	DCL-84-328	ABM 10/24/84,28	U	THE 5/31/84 MEMO DISCREDITS THE NRC STAFF CONCLUSION THAT A307 BOLTS AT DIABLO CANYON IS ACCEPTABLE
1209	RV		ABM 6/6/85, 33	E	PG&E MADE A FALSE STATEMENT BECAUSE THEIR 3/19/84 STATEMENT CONFLICTS WITH THEIR 5/17/84 STATEMENTS REGARDING CARBON LEVELS IN "SS" LINES
1210	OI		ABM 12/16/85, 33	E	SENSITIVE
1211	RV-P	DCL-84-343	ABM 12/17/84,28	U	CHALLENGE OF NRC POSITION ON CRACKS IN CCW LINES-AT 51 DEGREES F GET CONDENSATION AND DRIPPING WHICH WILL AFFECT THE WELD QUALITY-A PULLMAN MEMO 2/10/84 CONFIRMS PULLMAN'S KNOWLEDGE OF WELD PROBLEMS
1212	RV-P	DCL-84-343	ABM 12/17/84,28	P	IT IS A QUALITY ASSURANCE VIOLATION TO BASE DECISIONS ON VALUE JUDGEMENTS FOR SAFETY-RELATED WORK THAT MEANS THE WORK WAS NOT CONTROLLED BY PROCEDURE IN

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					VIOLATION OF 10 CFR 50 APPENDIX B REQUIREMENTS
1213	RV-P	DCL-84-343	ABM 12/17/84,28	E	CONTRARY TO THE NRC'S POSITION THAT WATER WAS NOT FLOWING DURING CCW WELDING A 2/10/84 PULLMAN MEMO REFUTE'S THIS STATEMENT, AND THE ALLEGER HAS SEEN WELDING WITH WATER FLOWING IN THE LINES
1214	NRR		28	E	EXAMINATION OF THE CARBON EQUIVALENCY FOR THE RELEVANT MATERIALS DETERMINED THAT IT IS SUSCEPTIBLE TO HYDROGEN ASSISTED CRACKING
1215	RV-P	DCL-84-343	ABM 12/17/84,28	E	RECENTLY AN INSPECTOR FOUND THROUGH MT THAT THREE OUT OF FOUR WELDS HAD CRACKS ON CCW PIPE ATTACHMENTS, THIS RESULTED IN UNDOCUMENTED REPAIR
1216	RV-P	DCL-84-343	ABM 12/17/84,28	U	SUPPORT PACKAGE 921-49 CONTAINS ILLEGAL QUICK FIXES, COPIED SIGNATURES, AND DIFFERENT REVISION OF THE SUPPORT
1217	OI		ABM 2/12/86,33	P	SENSITIVE
1218	NRR		26/28	E	PROC. FOR DRILLING HILTI QUIK BOLT HOLES ARE NOT FOLLOWED.THERE'S NO CONSISTENT INSPEC PROG TO LEARN IF REBAR HAS BEEN DAMAGED PRIOR TO DRY PACKING HOLES (SEE SSER 26, PG E-10 & ALL# 1120 IN SSER 28)
1219	NRR		26	D	QUICK FIX WAS USED TO ACCEPT WORKMANSHIP DEFICIENCIES (SEE SSER 26, PG E-5)
1220	RV-P	DCL-84-328	ABM 10/24/84,28	E	PULLMAN HAS VERBALLY INSTRUCTED INSPECTORS NOT TO WRITE DISCREPANCY REPORTS.THESE INSTRUCTIONS ARE CONFIRMED BY MEMO

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1221	RV-P	DCL-84-343	ABM 12/17/84,28	P	PULLMAN REPEATEDLY HAS REQUESTED INSPECTORS TO WRITE-UP SUSPECTED DEFICIENT CONDITIONS NOT EXPLICTLY DEFINED BY PROCEDURE, ON MEMORANDUM
1222	NRR		26/28	E	PULLMAN REFUSED TO PROCESS DCN INTO A DR.THE ISSUE CONCERNS 10 1/2 INCH EMBEDMENT IN TWELVE INCH CONCRETE (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1223	RV-P	DCL-84-343	ABM 12/17/84,28	P	WHEN SPECIFICATION VIOLATIONS ARE IDENTIFIED PULLMAN'S SOLUTION IS TO CHANGE THE SPECIFICATION RATHER THAN CORRECT THE VIOLATION
1224	OI			P	SENSITIVE
1225	RV-P	DCL-84-343	ABM 12/17/84,28	P	QC INSPECTOR WAS REQUESTED TO RE-CONSTRUCT RECORDS FOR STANCHIONS ON SAFETY-RELATED LINES
1226	OI		ABM 12/6/85, 33	P	SENSITIVE
1227	NRR		28	E	PG&E IS SUBJECT TO PREFERENTIAL TREATMENT BY THE NRC WHICH HAS GRANTED DISPENSATION TO OR IGNORED THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN NUREGS
1228	NRR		33	D	PG&E LACK OF COMPLIANCE WITH TMI RELATED NUREGS NOS. 737 & 588
1229	NRR		28/33	E	LACK OF COMPLIANCE WITH NUREG 0737 BRINGS INTO QUESTION WHETHER THE PLANT CAN WITHSTAND A TMI-TYPE ACCIDENT
1230	NRR		28	E	LACK OF COMPLIANCE WITH NUREG 0737 BRINGS INTO QUESTION WHETHER CERTAIN

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					ESSENTIAL SAFETY-RELATED EQUIPMENT CAN FUNCTION FOLLOWING AN ACCIDENT
1231	NRR		28	E	SAFETY-RELATED VALVES WERE DISASSEMBLED AND REPAIRED WITHOUT ADEQUATE DOCUMENTATION
1232	NRR		33	D	THERE IS NO DEMONSTRATED ASSURANCE THAT WHEN UNIT 1 BEGINS FULL POWER OPERATION IT WILL BE ISOLATED FROM UNIT 2
1233	NRR		ABM 4/3/86,26/33	E	PG&E LACK OF IMPLEMENTATION OR RECOMMENDATIONS STEMMING FROM NUREG-0531 AND NUREG-0691 (SEE ALLEGATION 1195)
1234	NRR		26	E	THE TYPE OF MATERIAL USED IN THE RCS (316 SS) IS SUSCEPTIBLE TO IGSCC AND THEREFORE REQUIRES SPECIAL DETECTION CAPABILITY (SEE ALLEGATION 1195)
1235	NRR		26	E	IGSCC POTENTIAL EXISTS IN THE "NON-PRIMARY SYSTEMS".A REVIEW OF PUBLICLY AVAILABLE INFORMATION INDICATES THAT PG&E HAS NO PLANS TO DETECT AND CORRECT THIS PROBLEM (SEE ALLEGATION 1195)
1236	NRR		26	E	DIABLO CANYON HAS FURNACE-SENSITIZED SAFE ENDS HOWEVER, A REVIEW OF PUBLICLY AVAILABLE RECORDS INDICATE THAT PG&E HAS NOT CONDUCTED A REPAIR PROGRAM (SEE ALLEGATION 1195)
1237	NRR		26	E	BECAUSE THE STAINLESS STEEL CARBON CONTENT AT DIABLO CANYON VARIES BETWEEN .06 AND .07 IT IS VERY SUSCEPTIBLE TO IGSCC. PG&E SHOULD IMPLEMENT A CORRECTIVE ACTION PROGRAM (SEE ALLEGATION 1195)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1238	NRR		26	E	THE METHODS FOR WELDING AND GRINDING PERFORMED ON THE RCS DO NOT DEMONSTRATE THAT THE RELEVENT STRESS WAS AVOIDED (SEE ALLEGATION 1195)
1239	NRR		33	E	PG&E HAS NOT COMPLIED WITH REG GUIDE 1.143 AND ANSI B31.1 FOR THE DESIGN AND INSPECTION OF WELDING OF RADWASTE SYSTEMS
1240	NRR		28	E	PG&E MADE A FALSE STATEMENT WHEN THEY STATED THAT THE PRE-INSPECTION PROGRAM WAS NOT A SUBSTITUTE FOR QUALITY CONTROL
1241	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E'S ANSWER CONCERNING THE PREINSPECT PROCEDURES IS MISLEADING BECAUSE THE PROGRAM WAS CONTROLLED THROUGH NUMEROUS UNCONTROLLED MEMO'S, MANY OF WHICH CONTRADICTED EACH OTHER
1242	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E STATED THAT QC WAS ASSIGNED TO INSPECT EXISTING WELDS, THIS STATEMENT IS FALSE BY OMMISSION.THE PRE-INSPECTION GROUP HAD RESPONSIBILITY FOR THIS ACTION
1243	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E MADE A FALSE STATEMENT WHEN THEY STATED THAT IT WASN'T THE FIELD ENGINEER'S RESPONSIBILITY TO TRACK PREVIOUS DOCUMENTATION FOR EXISTING WORK.IT WAS
1244	RV		ABM 10/24/84,28	E	PG&E'S RESPONSE TO GAP ALLEGATION #229 IS FALSE.PG&E STATES THAT THERE IS NO TECHNICAL SIGNIFICANCE TO THE ISSUE.THERE ARE WELDS THAT ARE UNDERSIZED
1245	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E'S RESPONSE TO GAP ALLEGATION #235 ON THE LACK OF A UNIFORM SYSTEM OF WELD

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					SYMBOLS IS A FALSE STATEMENT BY OMISSION.THE ALLEGER WAS INSTRUCTED NOT TO USE AWS A2.4
1246	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E STATES THAT 350 PERSONS WERE TRAINED ON WELD SYMBOLS.THIS STATEMENT IS FALSE BY OMISSION.IT FAILS TO POINT OUT THAT WE WERE BEING TRAINED TO BECHTEL CRITERIA NOT TO AWS
1247	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E MADE A FALSE STATEMENT CONCERNING WELD SYMBOLS, THE ALLEGER STATES THAT HE CAN IDENTIFY CASES THAT ARE SO INADEQUATE THAT THE SAME SYMBOL CONTRADICTS BETWEEN PIPING AND CIVIL WELDS
1248	RV-P	DCL-84-343	ABM 12/17/84,28	E	DUE TO THE INTENSE PRESSURE AT THE SITE THERE WASN'T ANYTIME TO LOOK UP THE WELD SYMBOLS IN REFERENCE DOCUMENTS--THE INSPECTORS HAD TO GUESS WHEN THEY FOUND AN UNFAMILIAR SYMBOL
1249	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E MADE THE FALSE STATEMENT THAT REFERENCE DOCUMENTS WERE COMMONLY AVAILABLE AS READY REFERENCES; RESEARCH MATERIALS WERE NOT READILY AVAILABLE
1250	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E STATEMENT IS MISLEADING THAT THE VAST MAJORITY OF PIPE SUPPORT/ RUPTURE RESTRAINT WORK IS COVERED BY SIX SYMBOLS.THERE ARE HUNDREDS OF VARIATIONS OF WELDING SYMBOLS
1251	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #238 OF THE USE OF AN ORAL TRADITION TO INTERPRET WELD SYMBOLS IS FALSE.ORAL TRADITION REPLACED RATHER THAN

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					COMPLEMENTED THE WELD DOCUMENTATION PROGRAM
1252	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #239 THAT WELDS DONE WITHOUT PROPER INSTRUCTIONS WERE REVIEWED GIVES A FALSE ASSURANCE.THE SYMBOLS ARE TOO VAGUE FOR DESIGN ENGINEERS TO MAKE JUDGEMENTS
1253	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #240 THAT THE TERM "TYPICAL" WAS UNDERSTOOD AND ONLY USED TO DESCRIBES WELDS ON SPECIFIC DRAWINGS IS FALSE.THE TERM WAS USED GENERICALLY AND WAS NEVER DEFINED
1254	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #241 ON IRRELEVENCE OF SYMBOLS TO OVER WELDING IS FALSE.VAGUE SYMBOLS LED TO PROBLEMS FROM CONFUSING DEPTH OF PENETRATION TO EFFECTIVE THROAT OF WELDS
1255	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #241 ASSERTS EXCESSIVE WARP AND SHRINKAGE ARE NOT VALID CONCERNS IF REQUIREMENTS ARE MET.HOWEVER, FITUP DISTORTIONS ARE SO SEVERE THEY EXCEED DESIGN
1256	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #241 STATES THERE IS NO BASIS THAT OVERWELDING WOULD CONTRIBUTE TO EARLY FATIGUE OR PREMATURE AGING.THIS IS AN FALSE STATEMENT
1257	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E RESPONSE LETTER TO GAP ALLEGATION #143 THAT RELEVANT SUPERVISORS ARE NOT AWARE OF ORDERS TO STOP WORKING ON WELD SYMBOL PROBLEMS IS FALSE.I WAS ORDERED TO STOP WORKING ON THIS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1258	RV		ABM 7/12/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #244 ON FAILURE TO PROCESS MVR'S ON WELDING SYMBOLS IS FALSE.PG&E SAYS THE INDIVIDUAL IS RESPONSIBLE .I TRIED TO LOG MY MVR BUT WAS STOPPED BY MANAGEMENT.
1259	OI		ABM 12/16/85, 33	P	SENSITIVE
1260	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #246 ON PROMISES TO THE FIELD FOR REFORM IS MISLEADING.THEIR RESPONSE IS OUT-OF-DATE OCCURRING IN LATE 1983 AND EARLY 1984 AND INADEQUATE.
1261	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #247 ON FAILURE TO ADEQUATELY CONTROL PREHEATING IGNORES MY POINT.SPECIFICATIONS DO INCLUDE RELEVANT CODE REFERENCES BUT ARE NOT IMPLEMENTED IN THE FIELD.
1262	RV		ABM 10/24/84,28	E	CONTRARY TO THE PG&E RESPONSE TO THE GAP ALLEGATION #253 PG&E KNEW THAT WELD SYMBOLS COULD ADVERSELY AFFECT QUALITY.THERE IS NO TIME TO CLARIFY VAGUE WELDING SYMBOLS.
1263	RV		ABM 10/24/84,28	E	PG&E RESPONSE TO GAP ALLEGATION #254 STATES WORKERS ARE ASSUMED TO HAVE ADEQUATE KNOWLEDGE OF WELD SYMBOLS FROM PREVIOUS TRAINING.THIS DOES NOT HELP BECAUSE OF THE USE OF NON-STANDARD SYMBOLS.
1264	RV-C		85-27, 33	E	PG&E RESPONSE TO GAP ALLEGATION #259 ON WALKDOWN BY PERSONNEL WHO MARKED UP DRAWINGS USED BY QC IS MISLEADING. THE PEOPLE WERE NOT QUALIFIED.

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1265	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E CLAIM THAT REINSPECTIONS ARE PERFORMED WHEN INCOMPLETE WELD DESCRIPTIONS ARE IDENTIFIED IS FALSE. I IDENTIFIED MANY CASES OF GROSS DEFICIENCIES AND NO CORRECTIVE ACTION WAS TAKEN
1266	RV		84-11,26	E	PG&E RESPONSE TO GAP ALLEGATION #298-300 ON DESIGN AND OPERATOR DRAWING INADEQUACY IS INADEQUATE.PG&E DESCRIBED THE SYSTEM MY ALLEGATION WAS ON THE IMPLEMENTATION OF THE SYSTEM
1267	RV		84-11,26	E	*ON DECEMBER 10 & 11, 1983 THE UNIT 1 OVIDs AND P&IDs ARE IN CONFLICT IN SAFETY-RELATED SYSTEMS
1268	OI		ABM 12/16/85, 33	P	SENSITIVE
1269	OI		ABM 12/16/85, 33	P	SENSITIVE
1270	RV-C		85-27, 33		PG&E RESPONSE THAT AN INDIVIDUAL WAS UNAWARE OF ORDERS TO STOP WORKING ON HANGERS IS MISLEADING.ANOTHER INDIVIDUAL GAVE THE ORDER BUT THE INDIVIDUAL SHOULD HAVE KNOWN
1271	OI		ABM 12/16/85, 33	P	SENSITIVE
1272	NRR		26	D	PG&E RESPONSE TO GAP ALLEG 284 THAT SAID I CONFUSED FIELD & DESIGN ENGINEERING FUNCTIONS IS MISLEADING AND UNRESPONSIVE. ITEMS MENTIONED AFFECT BOTH FIELD & DESIGN ENGINEERING (SEE SSER 26, PG E-5)
1273	NRR		26	D	PG&E'S RESPONSE THAT THE INFORMATIONAL DELAYS WERE ADDRESSED BY QUICK FIX PROGRAM IS MISLEADING.QUICK FIX

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					ENGINEERS WERE AS CONFUSED AS WE WERE (SEE SSER 26, PG E-5
1274	RV		ABM 10/24/84,28	E	IN GAP ALLEGATION #296 PG&E SAID AN INDIVIDUAL IS A TRAINING SUPERVISOR.THE INDIVIDUAL SAID TO ME AND LATER AFFIRMED HE WAS A DEPARTMENT MANAGER.THIS IS A FALSE STATEMENT.
1275	RV-P	DCL-84-343	ABM 12/20/84,28	E	BOTH THE NRC STAFF AND PG&E'S THEORIES MAY BE INACCURATE ABOUT HOW P&ID'S AND OVID'S ARE USED.UNIT 2 HYDROSTATIC TEST PACKAGES HAVE BEEN ISSUED WITH OVID'S INSTEAD OF P&ID'S AND THEY WERE INACCURATE
1276	RV-P	DCL-84-343	ABM 12/17/84,28	U	IN UNIT 2 HYDROSTATIC TEST PACKAGES I REVIEWED OVER 60% CONTAIN UNACCEPTABLE ERRORS.THESE ERRORS VIOLATE ANSI B31.7.THESE ERRORS MAY BE IN UNIT 1 ALSO.
1277	OIA		ABM 1/7/86, 33		THE NRC ALLOWED MY IDENTITY TO BE KNOWN
1278	NRR		26	D	QUICK FIX DESIGN CONTROL QUALITY SUFFERED DUE TO STAFF SHORTAGES AND PRODUCTION PRESSURE (SEE SSER 26, PG E-5)
1279	NRR		26	D	QUICK FIX PROGRAM OUTSTRIPPED THE CPSS COMPUTER PROGRAM, TO WHICH SIGNIFICANT AMOUNTS OF WORK WERE PERFORMED (SEE SSER 26, PG E-5)
1280	NRR		26	D	QUICK FIXES WERE LISTED UNDER THE WRONG SUPPORT NUMBER IN THE CPSS (SEE SSER 26, PG E-5)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1281	RV-P	DCL-84-343	ABM 12/17/84,28	E	MANY QA REPORTS NEVER MADE IT INTO THE FORMAL QA REPORTING SYSTEM.I COULD REJECT WORK BUT COULDN'T INITIATE QUALITY REPORTS
1282	RV-P	DCL-84-343	ABM 12/17/84,28	P	DCN'S OR OTHER REPORTS WERE OFTEN DISPOSITIONED WITHOUT ENSURING THAT THE CAUSE OF THE VIOLATION WAS IDENTIFIED AND CORRECTED
1283	RV-P	DCL-84-343	ABM 12/17/84,28	P	QUALITY REPORTING SYSTEM DID NOT PROVIDE FOR IDENTIFYING THE FULL EXTENT OF DEFICIENCIES, NOR WAS THERE ANY USEFUL EFFORT TO TREAT IDENTIFIED PROBLEMS
1284	RV-P	DCL-84-343	ABM 12/17/84,28	E	UNEXPLAINED DOCUMENT ALTERATIONS AND WELDS MADE OUT OF PROCEDURE WERE SIGNS OF DETERIORATING QA PERFORMANCE
1285	RV-P	DCL-84-328	ABM 10/24/84,28	E	MANAGEMENT DILUTED THE QC PROGRAM TO KEEP PACE WITH THE DETERIORATING QUALITY OF CONSTRUCTION
1286	RV-P	DCL-84-328	ABM 10/24/84,28	E	MANAGEMENT SPLIT UP THE QC INSPECTION TEAMS TO SHORTEN THE REVIEW TIME RESULTING IN A DECREASE IN THE QUALITY OF REVIEWS
1287	NRR		26	D	MANAGEMENT ORDERED US NOT TO REJECT WORK OR DOCUMENT ON THE PROCESS SHEET FOR VIOLATIONS.WE COULD RETURN QUICK FIXES FOR CLARIFICATION BUT NOT REJECT THEM (SEE SSER 26, PG E-5)
1288	NRR		26	D	MANAGEMENT'S ORDER TO NOT DOCUMENT OR REJECT WORK FOR VIOLATIONS SHOULD HAVE BEEN PROPOSED AND REVIEWED TO ENSURE NO SIGNIFICANT DAMAGE TO QUALITY (SEE SSER 26, PG E-5)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1289	RV-P	DCL-84-328	ABM 10/24/84,28	E	QC - 1 WAS REDUCED BY 80% TO SOLVE THE BACKLOG
1290	RV-P	DCL-84-343	ABM 12/17/84,28	P	PROCEDURE CHANGES WERE ACCOMPLISHED IN AN UNCONTROLLED FASHION THROUGH MEMORANDA
1291	NRR		28	E	CONTRARY TO PG&E STATEMENTS TO NRC, PREINSPECT ENGINEERS PERFORMED QA/QC WORK
1292	NRR		26	D	ONE TYPE OF U-BOLT SUBSTITUTED FOR ANOTHER WITH NO REFERENCE FOR THE SIZE OF THE HOLE OR ANY INSTRUCTIONS TO CONTROL INSTALLATION (SEE SSER 26, PG E-5)
1293	RV-P	DCL-84-343	ABM 12/17/84,28	P	PULLMAN WAS DRILLING HOLES WITHOUT APPROVE-FOR-CONSTRUCTION DRAWINGS.WHEN A REINFORCEMENT BAR IS HIT, ONLY A VERBAL OK BY QUICK FIX IS NECESSARY TO CONTINUE WHICH CONFLICTS WITH ESD 223.
1294	RV-P	DCL-84-343	ABM 12/17/84,28	P	INFORMAL INSTRUCTIONS OMITTED QC DOCUMENTATION CONTROLS CONTAINED IN THE PROCEDURES, WHICH THEN WERE SKIPPED IN PRACTICE.
1295	RV-P	DCL-84-343	ABM 12/17/84,28	P	LOST PROCESS SHEETS RESULTED WHEN PROCEDURES WERE VIOLATED AND THE QC REPORTING SYSTEM WAS SUPPRESSED
1296	RV-P	DCL-84-343	ABM 12/17/84,28	P	I WAS TOLD BY MANAGEMENT TO APPROVE A PULLMAN REQUEST FOR AUTHORIZATION TO ADD HANGERS TO THE EXCEPTION LIST EVEN THOUGH THE PROCESS SHEET WAS LOST.
1297	NRR		26/28	E	INCOMPLETE PROCESS SHEETS RESULTED IN UNUSED ANCHOR BOLTS NOT BEING DRY PACKED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WHEN REQUIRED TO BE (SEE SSER 26, PG E-10 AND ALLEGATION 1122 IN SSER 28)
1298	NRR		26/28	E	AN ESD 264 PROCEDURE TO VERIFY TORQUING OF ANCHOR BOLTS WAS VIOLATED (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
1299	RV-P	DCL-84-343	ABM 12/17/84,28	P	ESD'S WEREN'T ENFORCED BECAUSE EVEN SUPERVISORY PERSONNEL DID NOT KNOW WHAT WAS IN THEM
1300	RV-P		ABM 7/12/84,28	E	ESD 264 REQUIRES VERIFICATION OF PROPER BEVEL AND GAP ON SUPPORT MEMBERS TO EFFECT FULL PENETRATION AND GROOVE WELDS WHICH IS MUCH BROADER COVERAGE THAN ESD 223--CONFLICTING PROCEDURES
1301	RV-P	DCL-84-343	ABM 12/17/84,28	P	ESD 223 CONFLICTED WITH ESD 264 WHICH REQUIRES THAT WELD SIZE COMPLY WITH DRAWINGS.ESD 223 DIRECTS THAT OVERWELDING BE IGNORED AND NOT CHANGED ON THE AS-BUILT
1302	RV		ABM 10/24/84,28	E	ESD MERGED QC AND PRODUCTION RECORDS WHICH COMPROMISED QC'S INDEPENDENCE
1303	OI		ABM 12/6/85, 33	P	SENSITIVE
1304	RV-P	DCL-84-343	ABM 12/17/84,28	P	AN ESD CHANGE RESTRICTED INSPECTORS FROM WRITING REPORTS ON POOR WELDING IN EXISTING WORK.DEFECTS WERE PUSHED BACK TO THE AS-BUILT REVIEW.PG&E'S CLAIM THAT ALL WORK WAS COVERED BY QA IS FALSE.
1305	RV-P	DCL-84-343	ABM 12/17/84,28	P	PROCEDURE WAS BEING CHANGED BY A MEMORANDUM ONLY DISTRIBUTED TO MANAGEMENT

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1306	RV-P	DCL-84-343	ABM 12/17/84,28	P	1/24/84 MEMORANDUM CHANGES ESD 223 WHICH IS A QA VIOLATION
1307	RV-P	DCL-84-343	ABM 12/17/84,28	P	4/11/83 MEMORANDUM CHANGES ESD 223 WHICH IS A QA VIOLATION
1308	RV-P	DCL-84-343	ABM 12/17/84,28	P	1/24/84 MEMO TERMINATED THE DISPOSITION OF A PROCEDURE THRU DR 4678 WHICH HAD SUPERCEDED THE ESD PROCEDURES.IT IS IMPROPER TO AMEND A PROCEDURE THRU A DR DISPOSITION
1309	RV-P	DCL-84-343	ABM 12/17/84,28	P	1/24/84 MEMO TERMINATED THE DISPOSITION OF A PROCEDURE THRU DR 4870 WHICH HAD SUPERCEDED THE ESD PROCEDURES.IT IS IMPROPER TO AMEND A PROCEDURE THRU A DR DISPOSITION
1310	RV-P	DCL-84-343	ABM 12/17/84,28	P	GUIDELINES OF 1/24/84 AND 2/15/84 PREVENTED QC REPORTS ON EXISTING WORK WHICH WAS DEFINED AS ANYTHING BEFORE 10/82
1311	RV-P	DCL-84-343	ABM 12/17/84,28	P	SHIMS AND HANGERS THAT HAD SEAM WELDS OF NO STRUCTURAL VALUE WERE BOUGHT OFF BECAUSE THEY WERE ON "OLD WORK"
1312	RV-P	DCL-84-343	ABM 12/17/84,28	P	WE COULD NOT RELIABLY DETERMINE WHETHER WORK WAS "OLD" OR "NEW" BECAUSE PULLMAN'S RECORDS CONFLICTED OVER WHAT HAD OR HAD NOT BEEN ACCEPTED BY 10/82
1313	RV-P	DCL-84-343/85-077	ABM 7/26/85, 33	P	THE 1/24/84 AND 2/15/84 POLICY WAS USED TO BLOCK HARDWARE PROBLEMS FROM BEING REDLINED ONTO THE AS-BUILT DRAWINGS
1314	RV-P	DCL-84-343	ABM 12/17/84,28	P	FREQUENT DEFICIENCIES ON DRAWINGS FROM INCONSISTENT AND INACCURATE WELD SYMBOLS.PG&E'S RESPONSE TO NRC THAT THIS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					WAS RESOLVED THRU IMPROVED TRAINING IS INACCURATE
1315	RV-P	DCL-84-343	ABM 12/17/84,28	P	NEW REVISIONS OF DRAWINGS WERE SENT DIRECTLY TO THE FIELD BEFORE BEING PROCESSED AT DOCUMENT CONTROL
1316	NRR		28	E	OLD REVISIONS OF INSTRUCTIONS AND MANUALS WERE NOT ALWAYS RETRIEVED WHEN NEW VERSIONS WERE ISSUED
1317	RV-P	DCL-84-343	ABM 12/17/84,28	P	MANGEMENT WAS NOT INTERESTED IN RESOLVING PROBLEMS WE IDENTIFIED AND WHEN WE RAISED PROBLEMS TO SUPERVISORS THEY STOPPED THERE
1318	RV-P	DCL-84-343	ABM 12/17/84,28	E	MANAGEMENT WAS IGNORANT OF THE CODES, E.G. APPENDIX B
1319	RV-P	DCL-84-343	ABM 12/17/84,28	P	MEMORANDA GUIDING WORK CONFLICTED WITH ONE ANOTHER
1320	RV-P	DCL-84-343	ABM 12/17/84,28	E	CONFLICTING ORGANIZATIONAL CHARTS CREATED AN UNCLEAR CHAIN OF COMMAND
1321	RV-P	DCL-84-343	ABM 12/17/84,28	P	INFORMAL COMMUNICATIONS ALLOWED SIGNIFICANT MEMORANDA TO BYPASS THE DOCUMENT CONTROL CENTER
1322	RV-P	DCL-84-343	ABM 12/17/84,28	E	MANAGEMENT REFUSED TO HELP RESOLVE THE PROBLEM OF CONFLICTING MEMORANDA
1323	OI		ABM 12/16/85, 33	P	SENSITIVE
1324	RV-P	DCL-84-343	ABM 12/17/84,28	E	UNDERSIZE WELDS FOUND ON PRE-INSPECTED, ACCEPTED WORK.MANAGEMENT INSTRUCTED ME NOT TO REINSPECT.

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1325	OI		ABM 12/16/85, 33	P	SENSITIVE
1326	NRR		26	D	QUICK FIX DESIGN MODIFICATIONS RECEIVED SPORADIC ENGINEERING REVIEW SOMETIMES BEING SIGNED OFF WITHOUT BEING READ (SEE SSER 26, PG E-5)
1327	NRR		26	D	MANAGEMENT FINALLY CHANGED ESD 263 ALLOWING PARTIAL VOIDING OF QUICK FIXES. THIS INSTITUTIONALIZED A DEFICIENT PRACTICE (SEE SSER 26, PG E-5)
1328	NRR		28	D	CONTRARY TO PROCEDURE ESD 263 QUICK FIX REPORTS WERE PARTIALLY VOIDED AND SUPERCEDED.THIS IS A QC VIOLATION RESULTING IN AN INCOMPLETE RECORD OF DESIGN CHANGES (SEE ALLEGATION 368)
1329	RV-P	DCL-85-077	ABM 3/26/85,28	P	PROCEDURES ARE DEFICIENT FOR FISHPLATES. THERE ARE NO CHECKS ON HOLE SIZE BY QC
1330	RV-P	DCL-85-077	ABM 3/26/85,28	E	ON 12/28/83 ESD CHANGED THE REQUIREMENTS SAYING WASHERS ARE TO BE USED ON SAFETY-RELATED HILTI BOLTS. HOWEVER, THIS WAS NOT RETROACTIVE SO ALL UNIT 1 AND MOST OF UNIT 2 HILTI BOLTS HAVE NO WASHERS.
1331	RV-P	DCL-85-077	ABM 3/26/85,28	P	UNTIL 12/83 HILTI BOLTS WERE INSTALLED WITHOUT WASHERS IN UNIT 2.I BELIEVE THE SAME THING OCCURRED IN UNIT 1.
1332	NRR		26	R	I PULLED A SECOND SHIM OUT FROM UNDER A BASEPLATE AND TOLD MR. JOHNSTON ABOUT IT.HE SAID THE RELEVANT HANGER ALREADY WENT THROUGH THE SYSTEM SO NOTHING COULD BE DONE (SEE SSER 26, PG E-5)

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1333	RV-P	DCL-84-343	ABM 12/17/84,28	P	NO ONE CHECKED FOR ADDITIONAL BAD BASEPLATES THAT I KNOW OF.MANY MORE BASEPLATES MAY HAVE THE SAME TORQUING DEFICIENCY.
1334	RV-P	DCL-84-343	ABM 12/17/84,28	E	I PULLED A SHIM OUT FROM UNDER A BASEPLATE AND REPORTED IT TO PULLMAN.A GROUTING CREW CAME AND GROUTED THE SUPPORT WITHOUT THE SHIM IN PLACE.THE CREW SHOULD HAVE CHECKED THE SHIM FIRST.
1335	NRR		26/28	E	I INQUIRED TO MANAGEMENT ABOUT THE LACK OF TORQUING CONTROLS BUT GOT NO REPLY.I CHECKED THE SHIMS MYSELF AND PULLED TWO OUT BY HAND (SEE SSER 26, PG E-10 AND ALLEGATION 863 IN SSER 28)
1336	RV-P	DCL-85-077	ABM 3/26/85,28	P	TORQUING HILTI ANCHOR BOLTS THAT CONNECT SAFETY-RELATED PIPE SUPPORT BASE PLATES TO CONCRETE IS NOT ADEQUATELY CONTROLLED. SHIMS WERE USED BUT THERE WAS NO PROCEDURE DICTATING THEIR USE.
1337	RV		ABM 10/10/84,28	P	AN INSPECTOR QUESTIONED MANAGEMENT ABOUT USING WELDING CODE 7/8 WHEN NOT APPLICABLE.HE INFORMED ME HE NEVER RECEIVED A FORMAL ANSWER
1338	RV		ABM 7/12/84,28	P	CODE 7/8, WELDING PROCEDURE REQUIRING BACKING BARS, WAS BEING USED ON WELDS WITHOUT BACKING BARS AND OTHER CONFIGURATIONS NOT COVERED IN THE PROCEDURE
1339	RV-P	DCL-84-343	ABM 12/17/84,28	E	THE 9/6/83 MEMORANDUM CONCERNING VERIFICATION OF LINE NUMBERS WAS NOT IMPLEMENTED IN PRACTICE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1340	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E ISSUES CONFLICTING MEMORANDUM.8/10/83 MEMO INSTRUCTED PULLMAN NOT TO REMOVE PIPE HANGER INSULATION WHEN 9/6/83 MEMO TOLD PULLMAN TO VERIFY LINE NUMBERS.NEITHER MEMO HAS A CONTROL NUMBER
1341	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E CHANGED DESIGN BY MEMORANDUM.LARGE PIPE SUPPORTS IN BOTH UNITS WERE DELETED WITH THE ONLY REFERENCE ON THE HANGER PACKAGE.IT WAS NEVER MARKED ON THE AS-BUILD DRAWINGS FOR REVIEW.
1342	RV-P	DCL-84-343	ABM 12/17/84,28	P	FINAL VISUAL INSPECTION OF WELDS COULD NOT BE PERFORMED DUE TO WELDS BEING COVERED OVER WITH PAINT
1343	RV-P		ABM 7/12/84,28	P	PULLMAN QA PROGRAM FOR WELDING WAS NOT APPLIED TO PIPE SUPPORTS OR PIPE RUPTURE RESTRAINTS
1344	RV-P	DCL-84-328	ABM 10/24/84,28	E	PIPE RUPTURE RESTRAINTS PROGRAM WAS AUDITED AGAINST WRONG CONTRACT SPECIFICATION
1345	RV-P		ABM 7/12/84,28	P	NO QA MANUAL FOR CONTROL OF INSTALLATION OF RUPTURE RESTRAINT
1346	RV-P	DCL-84-343	ABM 12/17/84,28	P	ESD 223 ESTABLISHED QA POLICY THAT WAS NOT REVIEWED AND APPROVED BY PG&E QA DEPT PRIOR TO USE
1347	RV-P	DCL-84-343	ABM 12/17/84,28	P	SUBCONTRACTOR SUPPLIED HANGER ASSEMBLIES WERE NOT INSPECTED
1348	RV-P	DCL-84-343	ABM 12/17/84,28	P	PIPE HANGER ASSEMBLIES FABRICATED ON SITE DID NOT RECEIVE ANY IN PROCESS OR FINAL INSPECTION

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1349	RV-P	DCL-84-343	ABM 12/17/84,28	P	NO IN PROCESS INSPECTION OF PIPE SUPPORT INSTALLATION
1350	RV-P	DCL-84-343	ABM 12/17/84,28	P	INSPECTORS USED UNAPPROVED INSPECTION FORMS
1351	RV-P	DCL-84-343	ABM 12/17/84,28	P	WELD DISCREPANCIES ON PIPE SUPPORTS NOT DOCUMENTED
1352	RV-P	DCL-84-343	ABM 12/17/84,28	P	NO EXPLICIT ACCEPTANCE CRITERIA FOR PIPE SUPPORTS
1353	RV-P	DCL-84-343	ABM 12/17/84,28	P	NO INSTRUCTIONS FOR RECORDING INSPECTIONS OR WHAT ACCEPTANCE CRITERIA TO USE FOR RUPTURE RESTRAINTS
1354	RV-P	DCL-84-343	ABM 12/17/84,28	P	NO IN PROCESS INSPECTION OF RUPTURE RESTRAINTS WAS PERFORMED
1355	RV-P	DCL-84-343	ABM 12/17/84,28	P	WELDERS NOT QUALIFIED TO WELD MATERIAL THICKNESS ON RUPTURE RESTRAINTS
1356	RV-P		ABM 7/12/84,28	E	RUPTURE RESTRAINT WELDING NOT PERFORMED IN ACCORDANCE WITH PROCEDURE
1357	RV-P		ABM 7/12/84,28	P	PULLMAN AUDITS NOT CONDUCTED IN ACCORDANCE WITH ASME CODE OR 10CFR50 APPENDIX B
1358	RV-P		ABM 7/12/84,28	P	QA PROGRAM FOR PIPE SUPPORTS AND RUPTURE RESTRAINTS DOES NOT CONTAIN ANY COMMITMENT TO 10CFR50 APPENDIX B, ANSI STANDARDS, OR ASME CODE
1359	RV-P		ABM 7/12/84,28	P	INADEQUATE CORRECTIVE ACTION TAKEN WITH REGARD TO PREHEATING OF WELDS ON RUPTURE RESTRAINTS

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1360	RV-P	DCL-84-343	ABM 12/17/84,28	P	INADEQUATE CORRECTIVE ACTION TAKEN WITH REGARD TO NEED FOR EXPANDED PULLMAN AUDIT PROGRAM
1361	RV-P	DCL-84-343	ABM 12/17/84,28	P	INADEQUATE CORRECTIVE ACTION TAKEN WITH REGARD TO DEFICIENT QA DOCUMENTATION FOR PIPE SUPPORTS AND RUPTURE RESTRAINTS
1362	RV-P	DCL-84-343	ABM 12/17/84,28	P	BOSTON-BERGEN QA REQUIREMENTS BASED ON WRONG CONTRACT SPEC
1363	RV-P	DCL-84-343	ABM 12/17/84,28	P	IN RESPONSE TO ALLEGATION PG&E MADE FALSE STATEMENT REGARDING ALLEGERS FAILURE TO DOCUMENT HIS CONCERNS PRIOR TO MAKING ALLEGATION
1364	RV-P	DCL-84-328	ABM 10/24/84,28	E	QC INSPECTORS INSTRUCTED BY MANAGEMENT NOT TO DOCUMENT DISCREPANT CONDITIONS IN FORMAL REPORTS
1365	RV		28	E	ALLEGED PENETRATION OF PA AT DIABLO CANYON
1366	RV		28	E	GASOLINE DRAINED FROM GENERATOR WAS DUMPED IN CULVERT TO STREAM AND SAN LUIS BAY.LICENSEE INVESTIGATING
1367	RV		84-05,28	E	ALLEGER QUESTIONED RADIATION CONTROLS AND WAS COUNCELLED.HE FELT HARRASSED AND QUIT. HE INFORMED OF CONTROLS IN PLACE
1368	RV		ABM 7/26/84,33	E	OFFSITE BEHAVIOR OF CONTRACT EMPLOYEE MAY REFLECT ON RELIABILITY WHILE ON SITE
1369	NRR		26	D	FIELD QUICK FIX PROCEDURE SUPERCEDES DESIGN DRAWINGS (SEE SSER 26, PG E-5)

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1370	NRR		26	R	EXPERIENCE DICTATES POST WELD HEAT TREATMENT BUT WELDING CODE DOES NOT REQUIRE (SEE SSER 26, PG E-5)
1371	NRR		28	E	PERSONNEL WORKING IN FIELD HAVE NOT BEEN PROPERLY TRAINED
1372	NRR		28	D	FIELD CHANGES WERE NOT IN ACCORDANCE WITH ESTABLISHED DOCUMENTATION (SEE ALLEGATION 368)
1373	NRR		28	E	FIELD PERSONNEL DISCOURAGED FROM IDENTIFYING PROBLEMS
1374	NRR		26	D	QUICK FIX PROCEDURE USED TO JUSTIFY POOR WORKMANSHIP (SEE SSER 26, PG E-5)
1375	NRR		26	R	WELD SYMBOLS NOT PROPERLY DELINEATED ON THE DESIGN DRAWINGS OR MISSING (SEE SSER 26, PG E-5)
1376	NRR		26	R	USE OF NON-CONFORMING A307 BOLTS AS STUDS FOR COMPLIANCE WITH ASME CODE (SEE SSER 26, PG E-5)
1377	NRR		26	D	QUICK FIX PROCEDURE USED TO DESIGN HARDWARE (SEE SSER 26, PG E-5)
1378	NRR		26/28	E	ANCHOR BOLTS NOT PROPERLY EMBEDDED IN CONCRETE (SEE SSER 26, PGS E-5, E-10 AND ALLEGATION 1120 IN SSER 28)
1379	NRR		26/28	E	ANCHOR BOLT EMBEDMENT DEPTHS REQUIRED MORE THAN THE FLOOR THICKNESS (SEE SSER 26, PGS E-5, E-10 AND ALLEGATION 1120 IN SSER 28)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1380	NRR		33	E	DRAWINGS CHANGED BY DRAWING ROUTING PERSONNEL WITHOUT COORDINATION WITH DESIGN
1381	RV-C		85-27, 33		NUT ON STUD IN AUX FEED-WATER SYSTEM COULD NOT BE INSTALLED PROPERLY.NUT WAS CUT IN HALF AND INSTALLED THEN TACK WELDED TO BASE PLATE
1382	NRR		26	D	AS BUILT DRAWINGS DO NOT CURRENTLY REFLECT THE ACTUAL FIELD CONDITION (SEE SSER 26, PG E-5)
1383	NRR		28	E	QUALITY CONTROL PROCEDURE NOT PROPERLY DOCUMENTED / NOT FOLLOWED BY PERSONNEL
1384	NRR		28	E	FIELD PERSONNEL HAVE NOT BEEN PROPERLY TRAINED.ONLY READING OF DOCUMENTS IS REQUIRED
1385	NRR		28	E	QC PEOPLE ARE NOT FAMILIAR WITH CODES AND SPECIFICATIONS
1386	NRR		26/28	E	UNIT 2 HILTI KWIK ANCHOR BOLTS NOT REMOVED FROM WALLS, JUST CUT OFF FLUSH. NEW ANCHOR BOLTS ARE INSTALLED 1.5 INCHES AWAY W/OUT DOCUM LOC OF OLD BOLT (SEE SSER 26, PG E-10 AND ALL# 1120 IN SSER 28)
1387	NRR		26	K	UNIT 2 SUPPORT LAYOUTS ARE BEING MADE WITHOUT APPROVED CONSTRUCTION DRAWINGS OR PROCEDURES.DRILLING HOLES AND DRY PACKING VACATED HOLES FOR SPRINKLER HANGERS (SEE SSER 26, PG E-10)
1388	NRR		26/28	E	VACATED HOLES IN AUX BLDG ELEVATION 85 (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1389	NRR		26/28	E	HOLES DRILLED IN THE CONTAINMENT WALL DURING SUPPORT INSTALLATION (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1390	NRR		26/28	E	NO PROCEDURE EXISTS FOR REPAIRING HOLES DRILLED INTO CONCRETE (SEE SSER 26, PG E-10)
1391	NRR		26/28	E	NO PROCEDURE EXISTS FOR INSTALLING THRU BOLTS OR INSPECTING HOLES (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1392	NRR		26/28	E	USE OF A-360 MATERIAL FOR THRU BOLTS INSTEAD OF A-370 OR A-325 BOLTS IN SUPPORTS (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1393	NRR		33	E	INSPECTORS ON SITE DO NOT MEET REQUIREMENTS OF ANSI 45.2.6
1394	NRR		26/28	E	HANGER-DIESEL GENERATOR EXHAUST- ANCHOR BOLT HAS IMPROPER EMBEDMENT (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1395	NRR		26/28	E	HILTI KWIK BOLTS WERE PUT IN ON OPPOSITE SIDES OF WALLS VERY CLOSE TO EACH OTHER (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1396	NRR	DCL-85-089	33	E	ABILITY OF THE SUPPORTING MAIN STRUCTURE SHOULD BE EVALUATED FOR THE SUPPORT LOADS REACTED BY THAT STRUCTURE
1397	RV-C		85-27, 33		DIESEL GENERATOR LUBE OIL TRANSFER SYSTEM SUPPORT 2085R HAS A NUT BEARING ON WELD AND HALF OF A SHIM PLATE.THIS CONDITION NOT SHOWN ON AS-BUILT DRAWING

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1398	NRR		26	R	WING PLATE ON SUPPORT 2085R USED PARTIAL PENETRATION WELD INSTEAD OF FULL PENETRATION WELDS CONSTRUCTION DRAWINGS REQUIRED (SEE SSER 26, PG E-5)
1399	RV-C		85-35,33		UNIT 2 RHR CONTAINMENT SUMP RECIRCULATION LINE TO RHR PUMP IS SEAL WELDED WITH NO PENETRATION
1400	NRR		26/28	E	HILTI QUIK BOLTS WERE CUT OFF AND LEFT IN WALLS (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1401	NRR		26/28	E	ANCHORS CUT OFF FLUSH WITH WALLS, LEFT IN HOLES, & NEW HOLES DRILLED WITH INSTALL OF NEW ANCHOR BOLTS IN VIOL OF MIN DISTANCE CRITERIA (SEE SSER 26, PG E-10 AND ALLEGATION 1120 IN SSER 28)
1402	NRR	DCL-85-104	26/28	E	BOLT GROUTING PROCEDURE DOES NOT LOAD THE GROUT (SEE SSER 26, PG E-10)
1403	RV-P		ABM 7/26/84,28	U	PROBLEMS WITH WELDS ON CCW SYSTEM ARE NOT BEING FOUND BECAUSE ONLY LIQUID PENETRANT TESTING IS BEING PERFORMED ON WELDS.
1404	RV-P		ABM 7/26/84,28	E	WELDS ON CCW LINES REQUIRE ONLY "PT" BUT "PT" ONLY FINDS SURFACE INDICATIONS.THIS MEANS PROBLEMS AT THE ROOT ARE NOT BEING FOUND.
1405	RV-P		ABM 7/26/84,28	E	DURING CCW WELDING THE BEADS FROZE ON CONTACT WHICH RESULTED IN A FAILURE TO ACHIEVE THE NECESSARY ROOT FUSION-ALSO FILLET WELDS WERE CONSEQUENTLY PRODUCED INSTEAD OF FULL PEN WELDS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1406	RV-P	DCL-84-343	ABM 12/17/84,28	U	BAD WELDS ON STANCHIONS ATTACHED TO CLASS I LARGE-BORE COULD FAIL DURING A SEISMIC EVENT.
1407	RV-P		ABM 7/26/84,28	E	WELDING CODES ARE NOT BEING INTERPRETED CORRECTLY WHEN BEADS FREEZE ON CONTACT AND WHEN ONLY "PT" IS PERFORMED ON THE WELDT
1408	RV-P	DCL-84-343	ABM 12/17/84,28	U	QC INSPECTORS RESTRICTED FROM IDENTIFYING DISCREPANCIES IN"OLD"WORK
1409	RV-P	DCL-84-343	ABM 12/17/84,28	P	THOUGH LINEAR INDICATIONS WERE FOUND ON A WIDE FLANGE BEAM THE INSPECTOR WAS NOT ALLOWED TO DOCUMENT THE DISCREPANCY BECAUSE OF CONTRACTOR JURISDICTIONAL BOUNDARIES.
1410	RV	DCL-84-349	84-31,85-05,28/33	E	FOLEY FOREMAN ALLOWS PYROCRETE FIRE DOORS TO BE ACCEPTED WITH SUPPORT BOLTS CUT TO LESS THAN FULL LENGTH AND IMPROPERLY ADJUSTED SHIMS
1411	RV		84-33,28	E	STARTUP HAS COME AND TIGHTENED FLANGES WITHOUT ANY APPARENT CONTROLS, INCLUDING LACK OF ANY QC INSPECTOR
1412	RV		84-36,28	E	USING TWICE MINIMUM TORQUE VALUE CAN RESULT IN EXCESSIVE BOLT STRESS (ESD-238)
1413	RV		84-36,28	E	THERE IS NO CLEAR PROCEDURE OR SPECIFICATIONS FOR THE USE OF A307 MATERIAL IN CLASS C SYSTEMS
1414	RV		84-31,28	E	BOLTS INSTALLED ON POST INDICATOR VALVES AND FIRE HYDRANT FLANGES WERE STANDARD OR LESS THAN STANDARD WHEN THEY WERE REQUIRED TO BE OF GRADE B OR BETTER

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1415	RV		84-31,28	E	A FOLEY QC INSPECTOR DID NOT WRITE A NONCONFORMANCE REPORT ON THE BOLTS STATED IN ALLEGATION 1414 AND SAID THAT THE SITUATION COULD BE TAKEN CARE OF WITHOUT A FORMAL NONCONFORMANCE REPORT
1416	RV		84-31,28	E	ALLEGER SUSPECTS THAT THE BOLTS DISCUSSED IN ALLEGATION 1414 WERE NOT TRACEABLE AND DID NOT HAVE THE PROPER DOCUMENTATION
1417	RV		84-31,28	E	UNDERGROUND PIPE FITTINGS WERE NOT PROPERLY OR ADEQUATELY COATED WITH CORROSION PREVENTION MATERIAL
1418	RV		84-19,28	U	ALLEGER MAINTAINS THAT PG&E IMPROPERLY CALCULATED HIS NEUTRON EXPOSURE
1419	RV		84-19,28	U	ALLEGER MAINTAINS THAT SURVEYS AND A SPECIAL WORK PERMIT HAVE BEEN MISPLACED BY THE LICENSEE
1420	OI		ABM 12/16/85, 33	P	SENSITIVE
1421	RV-R		84-42,28	U	PG&E FAILED TO PROPERLY RESOLVE A REPORTED CONCRETE VOID BEHIND HANGER IN UNIT 2 CONTAINMENT
1422	NRR		33	D	STOKES AND YIN ARE PREVENTED BY THE NRC FROM FOLLOWING THROUGH WITH ISSUES
1423	NRR		28	R	PG&E MADE AN INCORRECT STATEMENT WHEN THEY STATED THAT, "WARPING NORMAL AND SHEAR STRESSES WERE PRESENT IN ONLY A FEW CASES DUE TO THE PREPONDERANCE OF ANGLE AND TUBE STEEL SHAPES."
1424	NRR		28	D	PG&E SHOULD NOT HAVE EXCLUDED CERTAIN SNUBBERS ON PIPE QUALIFIED BY THE SPAN

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					RULES FROM THEIR REVIEW AS DISCUSSED IN THE JULY 2, 1984 TRANSCRIPT
1425	NRR		28	D	THE ALLEGER QUESTIONS WHETHER OR NOT SERIOUS ERRORS WERE FOUND IN LIGHT OF THE FACT THE NRC HAS ONLY AUDITED 21 OF THE 357 SUPPORTS, OF WHICH ONLY 191 WERE COMPLETED AT THE TIME OF THE AUDIT
1426	NRR	DCL-85-061	33	D	PG&E CONTROLLED COMPLETELY DR. CLOUD'S PORTION OF THE IDVP. HOW MUCH MORE DID PG&E CONTROL? FOR EXAMPLE, AT TELEDYNE, WESTINGHOUSE, AND OTHERS
1427	NRR	DCL-85-114	33	U	THE NRC HAS PERMITTED THE POSTPONEMENT FOR APPROXIMATELY A YEAR OF PG&E COMPLIANCE WITH SOME 6,000 LICENSING COMMITMENTS
1428	NRR		28	D	EXAMINATION OF THE AUDIT PERFORMED BY THE NRC INTO THE 21 OF 191 SUPPORTS CASTS SERIOUS DOUBT AS TO WHAT PG&E HAS NOT DONE, AS WELL AS THE NRC STAFF'S STANDARDS (SEE ALLEGATION 1425)
1429	NRR	DCL-85-136	28	D	THE MODIFICATIONS SINCE 1981 ARE NOT ENOUGH TO COUNTERACT THE EFFECTS OF A 7.5G EARTHQUAKE (SEE ALLEGATION 1425)
1430	NRR	DCL-85-041	28	D	CONCERNS ABOUT (1) A BRANCH LINE BEING SUBJECTED TO AXIAL BUCKLING, OR TENSILE STRESS AND (2) 15,000 FEET OF PIPE QUALIFIED BY THE SPAN RULE
1431	NRR	DCL-85-041	28	D	THE PIPE STRESS GROUP IMPROPERLY CONSIDERED A PAIR OF PIPE SUPPORTS IN ISOLATION WHEN THEY MUST BE CONSIDERED IN COMBINATION (SEE ALLEGATION 1424)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1432	NRR	DCL-85-041	28	D	MANY OF THE LINES SUBJECTED TO HIGH PRESSURE AND TEMPERATURE WILL GROW MORE THAN ANTICIPATED RESULTING IN FAILURE OF THE SUPPORT OR OF THE PIPE
1433	NRR		28	D	THE WALKDOWN PROGRAMS AT DIABLO CANYON DID NOT INCLUDE CHECKING THE SEISMIC CLEARANCES ON PIPE AND SUPPORTS TO ENSURE ADEQUATE CLEARANCE (SEE ALLEGATION 1432)
1434	NRR		28	D	THE NRC'S TEAM REVIEW CONSISTED OF ONLY 43 OUT OF 15,000 QUICK FIXES AND WAS INADEQUATE. PG&E ONLY REVIEWED 2000 OUT OF THE 15,000 QUICK FIXES (SEE ALLEGATION 368)
1435	RV-P	DCL-84-343	ABM 12/17/84,28	U	PLATE STEEL MATERIAL CERTIFICATE INDICATES FOREIGN MANUFACTURE CONTRARY TO CONTRACT REQUIREMENTS
1436	RV		ABM 10/24/84,28	E	THE DISCOVERY OF FOREIGN MANUFACTURED PLATE STEEL BY PG&E WAS NOT REPORTED TO THE NRC
1437	RV		ABM 10/24/84,28	E	SOME OF US WHO WERE ANONYMOUS HAVE HAD OUR IDENTITIES DIVULGED TO PG&E
1438	OIA		ABM 1/7/86, 33		NRR (VOLLMER) HAS OBSTRUCTED ISA YIN'S INDEPENDENCE TO FULLY INVESTIGATE AND RESOLVE HIS CONCERNS
1439	OIA		ABM 1/7/86, 33	P	SINCE 4/26, REPRISALS HAVE INTENSIFIED FOR AT LEAST ONE EMPLOYEE OUT OF THE THREE WHOSE CONFIDENTIALITY WAS COMPROMISED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1440	OI		ABM 12/16/85, 33	E	SENSITIVE
1441	OIA		ABM 1/7/86, 33	E	ALLEGER'S IDENTITY WAS COMPROMISED IN SSER 22 DUE TO NRC MISHANDLING THE INFORMATION PROVIDED BY THE ALLEGER UNDER A LETTER OF CONFIDENTIALITY
1442	OI		ABM 12/16/85, 33	P	SENSITIVE
1443	OI			P	SENSITIVE
1444	OIA		ABM 1/7/86, 33	E	NRC CARELESSLY HANDLED THE ALLEGER'S INFORMATION WHICH RESULTED IN HIS IDENTITY BEING DIVULGED
1445	OI		ABM 12/16/85, 33	P	SENSITIVE
1446	OI		ABM 3/13/86,33	P	SENSITIVE
1447	OI		ABM 3/13/86,33	P	SENSITIVE
1448	OI		ABM 3/13/86,33	P	SENSITIVE
1449	RV		ABM 10/28/85,33	P	NRC STAFF HAS NOT INDEPENDENTLY INVESTIGATED ALL OF THE PROBLEMS
1450	OI		ABM 12/16/85, 33	P	SENSITIVE
1451	NRR		28	E	THE ALLEGER DISAGREES WITH PG&E'S RESPONSE TO HIS EARLIER ALLEGATION THAT EXCESSIVE CARBON ON STAINLESS STEEL MAY CAUSE INTERGRANULAR STRESS CORROSION CRACKING (SEE ALLEGATION 816)
1452	NRR	DCL-85-073	28	E	THE ALLEGER DISAGREES WITH PG&E'S RESPONSE TO HIS EARLIER ALLEGATION THAT WELDING HAS BEEN APPROPRIATELY CONTROLLED FOR HEAT INPUT AND INTERPASS TEMPERATURES (IGSCC)

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1453	NRR	DCL-85-073	28	E	THE ALLEGER DISAGREES WITH PG&E'S RESPONSE THAT THERE WERE ONLY A FEW CASES OF STAINLESS STEEL PIPE BREAKAGES AT SAN ONOFRE (IGSCC)
1454	NRR	DCL-85-073	28	E	PG&E'S RESPONSE APPLIES ONLY TO RCS IT DOES NOT ADDRESS THE ALLEGER'S CONCERN ABOUT THE SECONDARY LINES (IGSCC)
1455	OI		ABM 12/6/85, 33	E	SENSITIVE
1456	RV-P	DCL-84-343	ABM 12/17/84,28	E	PG&E'S ASSERTION THAT HIGHER CARBON GRADE SUCH AS 304H HAVE NOT BEEN USED FOR PIPING IS FALSE
1457	RV		ABM 10/24/84,28	E	PG&E ASSERTED THAT ASME IS THE REQUIREMENT FOR WELDED STUDS ON THE CONTAINMENT LINER CONTRARY TO ESD 272 REFERENCES AWS REQUIREMENTS
1458	RV		ABM 10/24/84,28	P	PG&E'S RESPONSE DOES NOT ADDRESS THE ACCEPTABLILITY OF A307 BOLTS WITH HEADS CUT OFF
1459	RV-P	DCL-84-343	ABM 12/17/84,28	P	PG&E TRANSFERRED THE AUTHORITY OF EXISTING WELD PROGRAM FROM QA/QC TO UNTRAINED FIELD ENGINEERS
1460	RV		ABM 10/24/84,28	E	PG&E'S RESPONSE TO THE ALLEGER'S EARLIER CONCERN THAT RESIDUAL STRESSES ARE SELF-RELIEVING IS FALSE
1461	NRR		28	E	THE ALLEGER DISAGREES WITH PG&E'S RESPONSE THAT SUPPORTS GENERALLY ARE NOT HIGHLY RESTRAINED (SEE ALLEGATION 1203)
1462	RV		ABM 10/24/84,28	P	THE ALLEGER FEELS THAT PULLMAN'S MEMO TO STOP THE USAGE OF A307 BOLTS WITH HEADS

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DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					REMOVED ACKNOWLEDGED PG&E AND NRC WERE WRONG BY ACCEPTING IT
1463	OI		ABM 12/16/85, 33	P	SENSITIVE
1464	RV		ABM 10/24/84,28	U	THE ALLEGER DISAGREES WITH NRC'S CONCLUSION THAT WELDING ON CCW LINES WITH WATER INSIDE IS ACCEPTABLE WHEN 50 DEGREE PREHEAT TEMPERATURE IS MANITAINED. HE CLAIMS THIS CAUSED THE CRACKS FOUND
1465	OI		ABM 2/12/86,33	P	SENSITIVE
1466	NRR		28	D	QUICK FIXES WERE USED TO ACCEPT BLATANT WORKMANSHIP DEFICIENCIES ON OLD AND IN PROCESS WORK. NRC'S INVESTIGATION IS STILL NOT COMPLETED (SEE ALLEGATION 368)
1467	RV-P	DCL-84-343	ABM 12/17/84,28	P	BREAKDOWN OF THE REPORTING SYSTEM MAKES IT DIFFICULT TO WRITE FORMAL REPORTS OF QA/QC VIOLATIONS. FIELD INSPECTORS ARE INSTRUCTED TO WRITE DCN ONLY RATHER THAN DR DIRECTLY.
1468	OI		ABM 12/6/85, 33	E	SENSITIVE
1469	NRR		28	D	ANYTHING ANYBODY CAN WRITE ON THE QUICK FIX BECOMES A DESIGN DRAWING IF THEY CAN GET SOMEBODY'S SIGNATURE ON IT (SEE ALLEGATION 368)
1470	OI		ABM 12/16/85, 33	P	SENSITIVE
1471	RV		ABM 10/24/84,28	P	THE ALLEGER REBUTS PG&E AND BECHTEL IN RESPONSE TO HIS 7/27/84 AFFIDAVIT ON THE ISSUE OF ASTM A307 BOLTS USED AS WELDED STUDS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1472	NRR		33	R	CONCERN REGARDING HELB CALCULATIONS FOR DCNPP. ALLEGER REFUTES FINDINGS OF ALLEGATION NUMBER 222 AND 223
1473	RV-R		84-42,28	U	PROBLEMS IDENTIFIED WITH PARAMOUNT SHOP WELDS ON SAFETY SYSTEM PIPING SUPPORT STANCHIONS
1474	RV		84-36,28	E	BECHTEL NOT STORING PARTS PROPERLY WHEN DISASSEMBLING VALVES
1475	RV		323/84-25,28	U	PIPING NOT PROPERLY RESTRAINED, 1" SLAG ON SS PIPE -- POROSITY ON ARC BURNOUT PEANED OVER. LOCATED IN BOTTOM CONTAINMENT ADJACENT TO CRANE BAY WALL.
1476	RV		83-28,28	U	THE PRIMARY SYSTEM WAS OPEN FOR A LONG TIME AND THERE IS JUNK PRESENT IN THE PRIMARY PUMPS
1477	OI		ABM 7/26/85, 33	P	SENSITIVE
1478	RV		84-05,28	U	CONCERNS REGARDING SECURITY OFFICERS NOT RECEIVING REQUIRED TRAINING IN RADIATION PROTECTION AND RESPIRATORY PROTECTION
1479	RV		84-37,85-06, 33	E	HOLDING POND HAS CRACKS THAT ALLOW CONTAMINATED WATER TO ESCAPE
1480	RV-P	DCL-85-077	ABM 3/26/85,28	E	FISH PLATES ON STEAM GENERATOR SUPPORTS DON'T SEEM TO BE ADEQUATE
1481	RV-P	DCL-85-077	ABM 3/26/85,28	E	ECCENTRICALLY EXTRUDED PIPE DISCOVERED BY UT DCN-1541-001
1482	RV-P	DCL-85-077	ABM 3/26/85,28	E	SHEAR LUGS NOT FULL PENETRATION WELDS UNIT 2 ISO. DESIGNATION 2-14-82

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1483	RV-P	DCL-85-077	ABM 3/26/85,28	E	UNISTRUT CLIPS NOT ADEQUATE ON LINES 2-5-22-3/4 AND 2-5-18-3/4
1484	RV-P	DCL-85-077	ABM 3/26/85,28	P	CONTAINMENT SPRAY CLAMP NOT TIGHT ON 73-44SL
1485	RV-C		85-35,33	E	UNITSTRUT AND THUNDERBIRD CLAMPS NOT ADEQUATE ON HYDROGEN GAS SYSTEM
1486	RV-C		85-27, 33	E	AN INDIVIDUAL QUESTIONS THE ACCEPTABILITY OF CAPPED OFF LINES COMING FROM REACTOR VESSEL SUPPORT PADS
1487	RV-P	DCL-85-077	ABM 3/26/85,28	E	HANGER (ON NPPR DC2-83-MM-P0196) HAD TO BE MADE REMOVABLE IN ACCORDANCE WITH PARAGRAPH 3.1.3 OF M-9 CRITERIA BECHTEL MANUAL. BECHTEL DOESN'T CONSIDER THIS CRITERIA IN THEIR DESIGN
1488	RV-C		ABM 6/6/85, 33	E	HANGERS ON FIRE WATER SYSTEM ARE AMBIGUOUS
1489	RV-C		ABM 6/6/85,33	E	FIRE WATER LINES OUT OF CONCRETE FLOOR NEED MASTIC IN TURBINE BUILDING
1490	NRR		33	E	AN INDIVIDUAL QUESTIONS ADEQUACY OF BEAM CLAMPS ON 8" FIRE PROTECTION LINES
1491	RV-C		ABM 6/6/85, 33	E	AN INDIVIDUAL QUESTIONS WHETHER THERE WAS A FIRE SYSTEM FLOW TEST PERFORMED PER NFPA REQUIREMENTS
1492	RV-P	DCL-85-077	ABM 3/26/85,28	P	PULLMAN PIPING ENGINEERS RECEIVED NO QA/QC TRAINING. THEY ASSUMED THAT THE ENGINEERS WERE FAMILIAR WITH THE PROFESSIONAL CODES
1493	RV		85-35,33	E	PULLMAN USED PIPE WELDING PROCEDURES ON STRUCTURAL STEEL. WHEN THE PROBLEM WAS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					IDENTIFIED, PULLMAN WROTE A MEMO WHICH REVISED THE ESD WHICH LEGALIZED THE EXISTING PRACTICE
1494	RV-P	DCL-85-077	ABM 3/26/85,28	E	FOR MANY YEARS PPP QC INSPECTORS HAD BEEN ACCEPTING FULL PENETRATION WELDS THAT CANNOT BE ACHIEVED DUE TO THE REQUIRED BEVEL ANGLE
1495	RV		84-42,28	U	WELDS ON PARAMOUNT PIPE SUPPORT STANCHIONS WERE EXCESSIVELY DISCREPANT. INSTEAD OF FULL PENETRATION WITH REQD FUSION, THE WELD WAS COVERED WITH A FILLET CAP, WITH A FAKE TIG ROOT ON THE INSIDE-UNIT 2
1496	RV		84-42,28	E	FOUR ADDITIONAL STANCHIONS WERE CHECKED AND WERE FOUND TO NOT HAVE THE REQUIRED WELDS (UNIT 2) i.e. FULL PENETRATION WELDS WERE NOT ACHIEVED
1497	RV		ABM 10/28/85,33	P	PTGC INSTRUCTED PIPE ENGINEERS TO THROW OUT RELEVENT DOCUMENTATION, INCLUDING ORIGINALS
1498	RV		84-42,28	P	PG&E REFUSED TO ALLOW STANCHION INSPECTION FOR IMPROPER WELDS IN UNIT 1. THE QUALITY OF STANCHION SHOP WELDS IS QUESTIONABLE
1499	RV		84-42,28	E	THE ALLEGER VISUALLY INSPECTED THE SIMILAR STANCHIONS IN UNIT 1 THAT WERE FOUND TO BE DEFECTIVE, IN UNIT 2. THEY LOOK IDENTICAL AND SHOULD BE CHECKED
1500	OI		ABM 12/16/85, 33	E	SENSITIVE
1501	RV-P	DCL-85-077	ABM 3/26/85,28	E	THE STANCHION REPAIR CREATED CARBON CONTAMINATION WITHIN THE RCS DUE TO

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CARBON ARCHING. PG&E LIFTED A PROHIBITION OF CARBON ARCHING TO MAKE THE REPAIRS
1502	RV-P	DCL-85-077	ABM 3/26/85,28	E	FISHPLATES WERE GROSSLY TOO THIN DUE TO UNDERLENGTH STUDS PROTRUDING FROM THE CONCRETE
1503	RV-P	DCL-85-077	ABM 3/26/85,28	E	DEFECTIVE FISHPLATES IDENTIFIED IN ALL FOUR STEAM GENERATORS IN UNIT 2 ARE ALSO DEFECTIVE IN UNIT 1
1504	RV-P	DCL-85-077	ABM 3/26/85,28	E	EVERYONE AGREED THAT THE FISHPLATES LOOKED WRONG, BUT NO ONE DID ANYTHING ABOUT IT
1505	NRR		33	E	THERE ARE 1-TON CONTAINERS OF POISONOUS LIQUID CHLORINE STORED IN THE OPEN, LEAVING THEM VULNERABLE TO SABATOGE
1506	NRR		33	E	PLANT SECURITY WAS NOTIFIED ABOUT THE CHLORINE TANKS, BUT NO PROTECTIVE MEASURES HAD BEEN DONE
1507	RV-P	DCL-85-077	ABM 3/26/85,28	E	THERE MAY BE EXTRANEOUS MATERIAL IN THE CONCRETE AT INTAKE STRUCTURE
1508	RV-P	DCL-85-077	84-42,28	U	THERE IS A VOID BETWEEN THE LINER PLATE AND THE CONCRETE FACE THAT IS 20 FEET LONG AND 10 FEET TALL WITH AN UNKNOWN DEPTH IN UNIT 2 CONTAINMENT. THIS WAS REPORTED TO MGMT BUT NOT CHECKED
1509	RV-P	DCL-85-077	ABM 3/26/85,28	E	THE REINFORCEMENT BAR INSIDE THE CONCRETE WALLS IS RUSTING IN THE INTAKE STRUCTURE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1510	RV-P	DCL-85-077	ABM 3/26/85,28	E	PG&E'S REPAIR TO THE RUSTED REBAR WEAKENS THE STEEL SKELETON OF THE CONCRETE
1511	RV-P	DCL-85-077	ABM 3/26/85,28	E	THERE IS A CRACK THROUGH THE CONCRETE FLOOR SLAB ALONG THE CENTER LINE OF THE CIRCULATING WATER PUMPS IN THE INTAKE STRUCTURE. PG&E KNEW BUT DID NOT TAKE CORRECTIVE ACTION
1512	RV-P	DCL-85-077	ABM 3/26/85,28	E	A DESIGN FLAW IN THE INTAKE STRUCTURE THREATENS THE ISOLATION AND INDEPENDENCE OF UNIT 1 FROM UNIT 2--COMMON AIR SUPPLY LINE FOR ASW SUMP LEVEL INDICATORS
1513	NRR	DCL-85-075	33	E	PROBLEM CONCERNING NFPA STANDARDS IS THE LACK OF ANY FIRE FLOW TESTS
1514	NRR	DCL-85-075	33	E	IT ISN'T AN ADEQUATE DEFENSE TO SAY THAT DC COULD RELY ON MUNICIPAL LINES FOR ADDITIONAL WATER--THERE ISN'T ENOUGH FIRE WATER STORAGE IF THERE WAS AN EARTHQUAKE THAT WOULD DAMAGE THE MUNICIPAL SUPPLY
1515	NRR	DCL-85-075	33	E	ALLEGER QUESTIONS WHETHER THE PIPES IN THE FIRE PROTECTION SYSTEM HAVE BEEN DESIGNED FOR THE PROPER FLOW CAPACITY
1516	NRR	DCL-85-144	33	E	LACK OF BILATERAL AND AXIAL SUPPORTS REQUIRED BY NFPA
1517	NRR	DCL-85-144	33	E	AT INTAKE, THERE ARE DEFICIENCIES IN THE FIRE PROTECTION SYSTEM THAT ARE REFLECTED THROUGHOUT THE ENTIRE FACILITY. NFPA STANDARDS HAVE NOT BEEN COMPLIED WITH FOR THE REST OF THE PLANT

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1518	NRR	DCL-85-144	33	E	THERE IS LACK OF CLEARANCES BETWEEN CONCRETE PENETRATIONS AND FIRE WATER PIPING
1519	RV-P	DCL-85-077	ABM 3/26/85,28	E	FULL CORRECTIVE ACTION ON PARAMOUNT PURCHASES WAS NEVER CARRIED OUT--SOME OF THE PARAMOUNT SHEAR LUGS ARE STILL NOT PROPERLY WELDED
1520	RV-P	DCL-85-077	ABM 3/26/85,28	E	DRAWINGS ARE INCORRECT AND DO NOT REFLECT THE TRUE AS-BUILT CONDITION AT THE PLANT, REGARDING SHOP WELDED PIPE SUPPORT STANCHIONS
1521	RV-P	DCL-85-077	ABM 3/26/85,28	E	INADEQUATE SUPPORT FOR REACTOR HEAD GASKET MONITOR LINES AND AN INADEQUATE FOLLOW-UP BY PG&E MANAGEMENT AFTER IDENTIFICATION
1522	RV-P	DCL-85-077	ABM 3/26/85,28	P	ALLEGER IDENTIFIED A LOOSE CLAMP ON THE CONTAINMENT SPRAY SYSTEM (SPECIFIC LOCATION NOT PROVIDED). IDENTIFIED TO PPP/PG&E ON 12/28/83 BUT WAS NOT CORRECTED.
1523	NRR	DCL-85-144	33	R	SEVERAL LINES IN THE HYDROGEN GAS SYSTEM WERE SUPPORTED BY ELECTRICAL CONDUIT CLAMPS THAT ARE NOT DESIGNED FOR THAT PURPOSE
1524	NRR	DCL-85-144	ABM 3/13/86,33	R	PG&E MANAGEMENT WOULD NOT TAKE CORRECTIVE ACTION ON THE PROBLEM OF THE INADEQUATE SUPPORT CLAMPS ON HYDROGEN GAS SYSTEM LINES
1525	RV-P	DCL-85-077	ABM 3/26/85,28	P	AN ANCHOR WITHIN THE REACTOR COOLANT SYSTEM HAS BEEN DAMAGED DUE TO EXCESSIVE WELDING. ANCHOR ON LINE 13, WELDED ON 4

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					TIMES INSTEAD OF 3 TIMES, THE MAXIMUM ALLOWED
1526	RV		84-42,28	U	AN INDIVIDUAL FEELS THAT PG&E FAILED TO SUBMIT A REPORT REQUIRED BY 10 CFR PART 21 REGARDING PARAMOUNT SHOP WELDS
1527	RV-P	DCL-85-077	ABM 3/26/85,28	E	A PARAMOUNT SPOOL (PIPE) WAS ECCENTRICALLY EXTRUDED
1528	RV-P	DCL-85-077	ABM 3/26/85,28	E	PTGC FAILED TO FOLLOW SECTION 3.13 OF ITS OWN M-9 DESIGN CRITERIA MANUAL
1529	OI		ABM 7/26/85, 33	E	SENSITIVE
1530	RV-P	DCL-85-077	ABM 3/26/85,28	E	THERE WERE TOO MANY TEMPORARY HANGERS IN PLACE FOR SMALL-BORE PIPING AROUND THE RCPs WITHIN CONTAINMENT
1531	RV-P	DCL-85-077	ABM 3/26/85,28	E	WITHIN UNIT 2 CONTAINMENT, AN INDIVIDUAL OBSERVED UNACCEPTABLE IMPURITIES IN THE ARGON THAT CAME FROM THE ARGON HEADER
1532	RV-P	DCL-85-077	ABM 3/26/85,28	E	THE NUTS THAT ARE INSTALLED FOR U-BOLTS THAT SUPPORT PIPING CONNECTED TO THE CARBON DIOXIDE TANKS AT INTAKE, ARE INSTALLED SUCH THAT THEY COULD POSSIBLY DAMAGE DELICATE SMALL-BORE LINES
1533	RV-P	DCL-85-077	ABM 3/26/85,28	E	THE UNSECURED STATUS OF THE CHLORINE TANKS COULD PREVENT CRITICAL HEAT TRANSFER
1534	RV-P	DCL-85-077	ABM 3/26/85,28	P	ONE OF THE CAUSES FOR POOR QUALITY, SLOPPY WORK AND STOP-GAP SOLUTIONS WAS THE SPECTRE OF UNREASONABLE DEADLINES THAT "MUST BE MET" TO AVOID SHUTTING THE PLANT DOWN

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1535	RV		84-42,28	U	INDIVIDUAL HAS CONCERNS REGARDING THE RVLIS SYSTEM BECAUSE THE WATER USED TO FILL THE CAPILLARY WAS NOT SUFFICIENTLY DEAERATED. HOTLINE WAS NOTIFIED
1536	RV		84-42,28	U	AN INDIVIDUAL ASSERTS THAT VALVES ON THE RVLIS SYSTEM SHOULD BE WELDED INSTEAD OF THREADED
1537	RV		84-42,28	U	CHANGES (UPGRADES) TO THE RVLIS ARE BEING INSTALLED IN UNIT 2 BUT NOT IN UNIT 1. POSTPONING THE UPGRADE WOULD FORCE WORKERS TO PERFORM THE UPGRADE IN A RADIOACTIVE ENVIRONMENT
1538	RV		84-42,28	U	WELDING OF UNIT 1 3/16 INCH INSTRUMENT TUBING IS BEING DONE BY WELDERS QUALIFIED FOR 6 INCH PIPE. HOTLINE WAS NOTIFIED
1539	OI		ABM 12/6/85, 33	E	SENSITIVE
1540	RV		84-42,28	U	DURING SEPTEMBER RVLIS REPAIRS, AN INDIVIDUAL LEARNED THAT BOTH LEGS IN ONE PORTION IN THE SYSTEM WERE NONFUNCTIONAL, IN VIOLATION OF THE LICENSE
1541	RV	DCL-85-077	84-42,28	E	AN INDIVIDUAL IS CONCERNED THAT PG&E AND THE NRC DID NOT PREPARE THEIR RESPONSE REGARDING THE USE OF ASTM A-307 AND ASME SA-307 GRADE B BOLTS. EIGHT POINTS ARE PRESENTED
1542	RV-P	DCL-85-077	ABM 3/26/85,28	P	INADEQUATE QC INSPECTOR TRAINING
1543	RV		85-27, 33	E	AN INDIVIDUAL FEELS THAT PG&E MADE FALSE STATEMENTS THAT LED TO THE RESOLUTION OF PREVIOUS ALLEGATIONS REGARDING WELDER

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					QUALIFICATION TEST SURVEILANCE. FIVE POINTS ARE PRESENTED
1544	RV-P	DCL-85-077	ABM 3/13/86,33	E	STAINLESS PIPE FITTINGS, SILVER BRAISED, ON THE UNIT 1 BORIC ACID TANKS, LEAKED AND WERE NOT REPAIRED. THIS WAS REPORTED TO THE HOTLINE
1545	NRR		28	E	IMPROPER USE OF PRELIMIN COMPUTER CALCULATIONS TO DRAW FINAL CONCLUSIONS ABOUT DAMAGE TO SENSITIVE INSTRUMENTS FROM SUSTAINED BREAKS OF HIGH ENERGY PIPING LINES
1546	OI		ABM 3/13/86,33	E	SENSITIVE
1547	NRR		28	D	CHANGE OF SEISMIC DESIGN REVIEW CRITERIA FOR PIPE SUPPORTS WHICH PERMITTED SUPPORTS WHICH WOULD HAVE FAILED TO PASS IN CALCULATIONS
1548	NRR		28	R	FAILURE TO PROVIDE JUSTIFICATION FOR USE OF 5X LESS PIPE SUPPORTS THAN AISC REQUIREMENTS
1549	NRR		28	D	CONTINUED DESIGN ERRORS DUE TO INACCURATE ASSUMPTIONS USED IN DESIGN CALCULATIONS
1550	NRR		28	D	MANAGEMENT QUICK FIX PROGRAM INSTITUTIONALIZED PRACTICES SUCH AS CHANGING THE DESIGN BY MEMORANDUM (SEE ALLEGATION 368)
1551	RV		ABM 1/10/85,28	E	FIELD ENGINEERS WERE DISCOURAGED FROM CORRECTING DESIGN DEVIATIONS BECAUSE OF EFFECTS ON PRODUCTION AND PRODUCTIVITY REPORTS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1552	RV		ABM 1/10/85,28	E	DOCUMENT CONTROLS DURING 1983 AND 1984 WERE SUFFICIENTLY INFORMAL THAT DESIGN CHANGES WERE MADE BY MEMORANDUM
1553	RV		84-42,28	U	UP TO 60 PARAMOUNT STANCHIONS WHICH HELP SUPPORT CRITICAL PIPING APPROX 40 FEET FROM THE REACTOR MAY BE COMPRISED BY FAKE WELDS
1554	RV		84-42,28	R	PG&E REFUSED TO PERMIT THE ENGINEER WHO DISCOVERED THE PROBLEM TO CHECK FOR IDENTICAL DEFECTS IN UNIT 1
1555	RV		84-42,28	R	PULLMAN JUSTIFIED THE REFUSAL TO CHECK ON GROUNDS OF NDE TECHNIQUES USED
1556	OI		ABM 12/16/85, 33	E	SENSITIVE
1557	RV	DCL-85-077	84-42,28	U	A FIELD ENGINEER DISCOVERED THROUGH SOUNDINGS A VOID BETWEEN THE CONCRETE LINER AND CONCRETE FACE
1558	RV-P	DCL-85-077	ABM 3/26/85,28	P	THE EFFECTS OF INADEQUATE INSTALLATION PROCEDURES ARE ILLUSTRATED BY A LOOSE CLAMP ON THE CONTAINMENT SPRAY SYSTEM
1559	RV		84-42,28	E	RVLIS INSTRUMENTATION MAY FAIL DUE TO IMPROPER INSTALLATION AND TESTING
1560	RV-P	DCL-85-077	ABM 3/26/85,28	E	REACTOR HEAD GASKET MONITORING LINES ARE IMPROPERLY SUPPORTED
1561	RV		ABM 1/10/85,28	E	ASSIGNMENT OF IMPROPERLY TRAINED AND QUALIFIED PERSONNEL AS WELD INSPECTORS AND FIELD ENGINEERS
1562	RV		ABM 1/10/85,28	E	INADEQUATE INSPECTOR TRAINING

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1563	RV		ABM 1/10/85,28	E	CRAFT PERSONNEL INFORMALLY TRAINED THAT QUALITY SPECIFICATIONS ARE GUIDELINES VS. REQUIREMENTS
1564	RV		ABM 1/10/85,28	E	FIELD TRAINING REINFORCED ILLEGAL TRADITIONS. CERTAIN INSPECTORS DURING 1983 WERE INSTRUCTED THAT PHYSICAL INSPECTIONS OF HARDWARE WERE NOT ALWAYS REQUIRED OR COULD BE SUBSTITUTED FOR SPECIFICATIONS
1565	RV		ABM 1/10/85,28	E	DURING 1984 PULLMAN WELDERS AND SUPERVISORS DID NOT HAVE COPIES OF NOR COMPLY WITH THE WELD PROCEDURES
1566	RV-C		85-27, 33	E	DURING 1984 WELDERS WORKED FOR MONTHS WITHOUT GAS FLOWMETER FOR MEASUREMENT OF SHIELD GAS
1567	RV-C		85-27, 33	E	INCOMPATIBLE FLOWMETERS AND PRESSURE REGULATORS WERE PURCHASED THROUGH 1984 SOME OF WHICH RECEIVE ONE FOURTH THE ARGON SHIELD GAS ASSUMED
1568	RV		ABM 1/10/85,28	E	DURING 1983 AND 1984 WELDS WERE REPAIRED WITHOUT PROCEDURES, QC COVERAGE, OR DOCUMENTATION. THIS HAS LED TO UNCORRECTED PROBLEMS AND WORSE DEFICIENCIES THAN ORIGINALLY EXISTED IN SOME CASES
1569	RV		ABM 1/10/85,28	E	(1983) PULLMAN MGMT INFORMALLY TOLD INSPECTORS TO WRITE UP VIOLATIONS ON PROCESS SHEETS INSTEAD OF FORMAL QA REPORTS. (1984) THEY WERE TOLD TO EASE UP ON PROCESS SHEETS DUE TO # OF PROBLEMS IDENTIFIED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1570	OI		ABM 3/13/86,33	E	SENSITIVE
1571	RV		ABM 1/10/85,28	E	QC PERSONNEL WERE INSTRUCTED TO NOT REJECT HANGERS AFTER FINDING UNEXPLAINED ALTERATIONS OF RECORDS
1572	RV		ABM 1/10/85,28	E	INSPECTION FORMS FOR CONTRACTOR GUY F ATKINSON COMPANY FAILED TO INCLUDE A PROVISION TO CHECK WELD TEMPERATURE REQUIREMENTS DURING THE PERIOD OF ONE INSPECTORS EMPLOYMENT
1573	RV		ABM 1/10/85,28	E	PULLMAN RECORDS WERE CONTRADICTORY WITH RESPECT TO OLD AND NEW WORK WHICH WOULD DEFINE WHETHER INSPECTION NEEDED TO BE CONDUCTED
1574	RV		ABM 1/10/85,28	E	SIGNATURE LOGS FOR PULLMAN QC SIGNATURES WERE AVAILABLE FOR ONLY A SHORT PERIOD OF TIME DURING 1983 and 1984 TO VERIFY SIGNATURES
1575	RV		ABM 1/10/85,28	E	LACK OF CALIBRATION OF WELDING FLOWMETERS WHICH CONTROL THE LEVEL OF ARGON SHIELDING GAS
1576	RV		ABM 1/10/85,28	E	INADEQUATE STORAGE CONDITIONS THROUGH JUNE 1984 FOR SAFETY CLASS 1 MATERIALS INCLUDING VALVES AND PIPE ELBOWS
1577	RV		ABM 1/10/85,28	E	INADEQUATE CONTROL OVER WELD ROD STORAGE CONDITIONS INCLUDING RODS FOUND LEFT ON A LEDGE AND WRAPPED IN RAGS
1578	OI		ABM 12/16/85, 33	P	SENSITIVE
1579	OI		ABM 3/13/86,33	P	SENSITIVE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1580	OI		ABM 3/13/86,33	P	SENSITIVE
1581	OI		ABM 3/13/86,33	E	SENSITIVE
1582	RV		ABM 1/10/85,28	E	DURING AN NRC INTERVIEW OF MR CHARLES STOKES OPEG SUPERVISORS ORDERED ENGINEERS TO THROW OUT BOOTLEG COPIES OF CONTROLLED DOCUMENTS
1583	OI		ABM 7/26/85, 33	E	SENSITIVE
1584	RV		ABM 1/10/85,28	E	DEFICIENT CONDITION NOTICES WERE VOIDED AND DESTROYED BY PULLMAN DURING 1983 AND 1984
1585	RV		84-42,28	E	PG&E PRESENTED A CODE CASE TO THE NRC THAT WAS IRRELEVANT FOR NEARLY ALL WORK AT DIABLO CANYON
1586	RV		ABM 1/10/85,28	P	PG&E HAS FALSELY ASSERTED THAT DCN'S ARE FOR WORK WHICH CANNOT BE CORRECTED DURING THE COURSE OF CONSTRUCTION
1587	RV		ABM 1/10/85,28	E	PG&E HAS FALSELY ASSERTED THE AMOUNT OF FOREIGN STEEL ONSITE
1588	OI		ABM 8/6/85, 33	P	SENSITIVE
1589	OI		ABM 12/6/85, 33	P	SENSITIVE
1590	OI			P	SENSITIVE
1591	RV		ABM 1/10/85,28	E	AFTER EXPRESSING A DESIRE TO INTERVIEW MORE WITNESSES ON SEISMIC DESIGN ERRORS THE STAFF CHANGED ITS MIND. THIS PREVENTED A NUMBER OF OPEG ENGINEERS FROM PROVIDING ADDITIONAL DISCLOSURES AT THAT TIME

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1592	RV		ABM 1/10/85,28	E	NRC INSPECTOR ISSUED ONLY A VERBAL WARNING TO PULLMAN QA MANAGEMENT AFTER CONFIRMING THAT QA RECORDS HAD BEEN VOIDED AND DESTROYED. THIS LACK OF ENFORCEMENT ACTION LED TO INCREASED ABUSES
1593	RV		ABM 1/10/85,28	E	NRC DID NOT RESPOND TO THE ALLEGER'S CONCERNS
1594	RV		ABM 1/10/85,28	E	NRC PARAPHRASING OF ALLEGATIONS HAS EFFECTIVELY CENSORED THE ALLEGATIONS TO THE POINT WHERE ISSUES WERE LOST
1595	RV		ABM 1/10/85,28	E	WITHIN TWO DAYS AFTER ISSUANCE OF FULL POWER LICENSE A NRC RESIDENT INSPECTOR WALKED AWAY FROM A PULLMAN QC INSPECTOR WHO ASKED FOR HELP AGAINST IMMINENT MANAGEMENT HARASSMENT
1596	RV		ABM 1/10/85,28	E	NRC RESIDENT INSPECTOR THE LAST DAY BEFORE VOTE ON FULL POWER LICENSE WAS UNABLE TO INFORM QC PERSONNEL WHETHER 10CFR PART 50 APP B APPLIED TO WORK AT DIABLO
1597	OI		ABM 12/16/85, 33	E	SENSITIVE
1598	OI		ABM 12/16/85, 33	P	SENSITIVE
1599	OI		ABM 12/16/85, 33	E	SENSITIVE
1600	OI		ABM 7/26/85, 33	P	SENSITIVE - 0271
1601	OI		ABM 3/13/86,33	P	SENSITIVE
1602	OI			P	SENSITIVE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1603	OI		ABM 3/13/86,33	P	SENSITIVE
1604	OI		ABM 3/13/86,33	P	SENSITIVE
1605	OI		ABM 3/13/86,33	P	SENSITIVE
1606	OI		ABM 3/13/86,33	P	SENSITIVE
1607	OI		ABM 3/13/86,33	P	SENSITIVE
1608	OI		ABM 3/13/86,33	E	SENSITIVE
1609	OI		ABM 12/16/85, 33	P	SENSITIVE
1610	RV		ABM 7/26/85, 33	E	PERSONS LEAVING PLANT DURING BOMB THREAT WERE TOLD THEIR JOBS WERE IN JEOPARDY
1611	OI		ABM 2/12/86,33	P	SENSITIVE
1612	OI		ABM 3/13/86,33	P	SENSITIVE
1613	OI		ABM 9/25/85,33	P	SENSITIVE
1614	OI		ABM 2/26/86,33	P	SENSITIVE
1615	OI		ABM 3/13/86,33	E	SENSITIVE
1616	OI		ABM 3/13/86,33	E	SENSITIVE
1617	OI		ABM 12/6/85,33	E	SENSITIVE
1618	OI		ABM 3/13/86,33	E	SENSITIVE
1619	OI		ABM 2/26/86,33	P	SENSITIVE
1620	OI		ABM 12/6/85, 33	P	SENSITIVE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1621	OI		ABM 12/16/85, 33	P	SENSITIVE
1622	OI		ABM 12/16/85, 33	E	SENSITIVE
1623	RV		ABM 7/26/85, 33	P	IN JUNE 1983 A SECURITY GUARD POINTED HIS AUTOMATIC WEAPON AT SIX MACHINISTS AT THE LOAD CENTER NEAR INTAKE STRUCTURE AND TOOK ONE AT GUNPOINT AFTER SOME INCIDENT. NOT SURE NRC WAS TOLD ABOUT THIS
1624	OI		ABM 12/16/85, 33	P	SENSITIVE
1625	RV		ABM 10/28/85,33	P	I WAS TOLD BY A FOREMAN TO IGNORE RADIATION ALARMS WHILE WORKING IN CONTAINMENT NOVEMBER 1983
1626	OI		ABM 12/16/85, 33	P	SENSITIVE
1627	OI		ABM 7/26/85, 33	P	SENSITIVE
1628	OI		ABM 7/26/85, 33	P	SENSITIVE
1629	OI		ABM 12/16/85, 33	P	SENSITIVE
1630	OI		ABM 3/13/86,33	P	SENSITIVE
1631	OI		ABM 3/13/86,33	E	SENSITIVE
1632	OI		ABM 3/13/86,33	E	SENSITIVE
1633	OI		ABM 3/13/86,33	P	SENSITIVE
1634	OI		ABM 3/13/86,33	E	SENSITIVE
1635	OI		ABM 3/13/86,33	P	SENSITIVE

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1636	OI			P	SENSITIVE
1637	OI		ABM 3/13/86,33	E	SENSITIVE
1638	OI		ABM 3/13/86,33	P	SENSITIVE
1639	OI		ABM 3/13/86,33	E	SENSITIVE
1640	OI		ABM 3/13/86,33	E	SENSITIVE
1641	OI		ABM 3/13/86,33	E	SENSITIVE
1642	NRR	DCL-85-010/026	28	E	THE MOST LIMITING COMBINATION OF VARIOUS PIPING LOADS WERE NOT ALWAYS USED AS INPUT FOR GANG SUPPORT CALCULATIONS
1643	NRR	DCL-85-010/026	28	E	UNUSUAL STRUCTURAL COMPONENTS OR DETAILS, SUCH AS INTERMEDIATE PLATES, WERE NOT ALWAYS ANALYZED BECAUSE THEY APPEARED TOO COMPLEX
1644	NRR	DCL-85-010/026	28	E	THE WELD STRESSES ARE NOT ALWAYS ANALYZED FOR ALL WELD CONFIGURATIONS OF A PIPE SUPPORT AND WELD CONFIGURATUIONS ARE NOT ALWAYS PROPERLY MODELED
1645	NRR	DCL-85-010/026	28	E	FLARE BEVEL WELDS ARE NOT ANALYZED FOR SHEAR IN THE BASE METAL
1646	NRR	DCL-85-010/026	28	E	THE DESIGN OF PIPE SUPPORTS USING WIDE FLANGE BEAMS OR CHANNELS DO NOT ALWAYS INCLUDE THE AFFECT OF TORSION
1647	NRR	DCL-85-010/026	33	E	CIVIL STRUCTURES TO WHICH PIPE SUPPORTS ARE ATTACHED MAY NOT BE PROPERLY ANALYZED FOR TORSIONAL LOADS
1648	NRR	DCL-85-010/026	28	R	ALLOWABLE STRESS VALUES SELECTED FOR LUGS ATTACHED TO PIPES MAY NOT BE BASED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					ON MAXIMUM OPERATING TEMPERATURE OF THE PIPE; STRESSES IN THE LUG WELDS MAY BE UNDERESTIMATED DUE TO IMPROPER WELD GEOMETRY
1649	RV-R		ABM 2/26/86,85-01,33	E	PENETRATION SEALS ARE BEING "FACED OFF" USING MATERIAL WHICH DOES NOT HAVE TRACEABILITY
1650	RV-R		85-01,33	E	HIGH DENSITY LEAD ELASTOMER MATERIAL WITH EXCEEDED MATERIAL EXPIRATION DATES WAS BROUGHT ON SITE FROM ANOTHER NUCLEAR PLANT SITE
1651	RV-R		85-01,33	E	DOW CORNING MATERIAL #6559 AND #1107 WAS USED EVEN THOUGH ITS EXPIRATION DATE HAD PASSED
1652	RV-R		85-08,33	P	INSTALLATION PERSONNEL WERE NOT TRAINED IN ACCORDANCE WITH PROMATEX PROCEDURE IP 1001-007
1653	RV-R		85-08,33	P	INSPECTION AND TESTING PERSONNEL WERE NOT CERTIFIED PROPERLY PER QCP-0010-007
1654	RV-R		85-01,33	E	LOT NUMBER OF CAULKING BEING USED WAS NOT DOCUMENTED PER QCP-0014-007 PAGE 10 OF 11
1655	NRR	DCL-85-053	28	E	SHEAR STRESS CALCS FOR WELDS AND MEMBERS PERFORMED BY BPC-GAITH FOR DC2 USED BPC-SF PROCEDURES WHICH ARE LESS CONSERVATIVE THAN THOSE NORMALLY USED BY BPC-GAITH
1656	RV-P	DCL-85-118	ABM 5/1/85, 33	E	AN INDIV CONCERNED WITH THE DIRECTION GIVEN HIM BY BECHTEL ENG, RE SYSTEM COMPLETION & DISPOSITION OF CABLE CUT FROM A REEL AND NOT USED

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1657	RV-P	DCL-85-177	ABM 6/6/85, 33		TURBINE PEDESTAL COLUMNS WERE WEAKENED BY REMOVAL OF STEEL AND DRILLING.
1658	RV		ABM 7/26/85, 33		EMPLOYEE OF SECURITY SERVICE CONTRACTOR ALLEGED MISCONDUCT OF DCPP NUCLEAR PLANT OPERATORS
1659	RV-P	DCL-85160	ABM 6/6/85, 33		ROOF DRAIN LINES THAT PENETRATE WALLS ABOVE THE FALSE CEILING IN THE CONTROL ROOM ARE WRAPPED WITH FLAMMABLE TAPE
1660	RV-P	DCL-85-160	ABM 6/6/85, 33		ACCESS CONTROL AND CONTROL ROOM VENTILATION EQUIPMENT ROOM VENTILATION EQUIPMENT ROOMS CONTAIN FLAMMABLE CANVAS AND VINYL ELBOW COVERS ON PIPING AND DUCTWORK
1661	RV-P	DCL-85-160	ABM 6/6/85, 33		THE JUMBO DUCTS IN THE 115' H AREA OF UNIT 1 BELOW THE EMERGENCY SHUTDOWN PANELS CONTAIN FLAMMABLE GASKET MATERIAL
1662	RV-P	DCL-85-160	ABM 6/6/85, 33		INSUFFICIENT ROOM WAS AVAILABLE TO INSTALL FOAM IN PENETRATIONS USED FOR PA SYSTEM CABLES
1663	RV-P	DCL-85-160	ABM 6/6/85, 33		SHRINKAGE OF THE SEALING FOAM OVER A TWO TO THREE YEAR PERIOD WAS NOT CONSIDERED IN THE FIRE BARRIER DESIGN
1664	RV-P	DCL-85-152/153	85-16, 85-39,33	E	CARDINAL MATERIALS QUALITY IS INDETERMINATE FOR MATERIAL PURCHASED PRIOR TO 1/9/84.
1665	RV-P	DCL-85-152/153	85-16, 85-39,33	P	PULLMAN'S VENDOR QUALITY SYSTEM AUDIT PROGRAM FOR CARDINAL, IS IN NONCONFORMANCE TO ASME SECTION III, NCA-3820.A, B AND C (1980 EDITION) AND 10CFR50 APP. B CRITERIA VII.

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1666	RV-P	DCL-85-152/153	85-16, 85-39,33	P	CARDINAL APPEARS TO HAVE HAD NO QUALITY SYSTEM PROGRAM COVERING HEAT TREATING OF MATERIAL DURING 1981.
1667	RV-P	DCL-85-152/153	85-16, 85-39, 33	P	PULLMAN'S VENDOR QUALITY SYSTEM AUDIT OF CARDINAL DID NOT ADDRESS HEAT TREATING OF MATERIAL AS REQUIRED
1668	RV-P	DCL-85-152/153	85-16, 85-39, 33	E	PG&E CONVENIENTLY IGNORED FINDINGS ON CARDINAL'S QA PROGRAM UNTIL WELL AFTER ANY LICENSING IMPACT.
1669	RV-P	DCL-85-152/153	85-16, 85-39, 33	P	PULLMAN'S 1981 AUDIT OF CARDINAL DID NOT AUDIT MAJOR PORTIONS OF THE QUALITY SYSTEM PROGRAM, AS REQUIRED.
1670	RV-P	DCL-85-152/153	85-16, 85-39, 33	E	PULLMAN'S 1981 AUDIT OF CARDINAL DID NOT AUDIT TO SEE IF NDE EXAMINATIONS WERE PERFORMED IN ACCORDANCE WITH APPROVED PROCEDURES.
1671	RV-P	DCL-85-152/153	85-16, 85-39, 33	E	PULLMAN'S AUDIT FAILED TO CHECK CARDINAL EMPLOYEES WHO PERFORMED FUNCTIONS WITHIN THE SCOPE OF ASME SECTION III, TO DETERMINE IF THEY WERE QUALIFIED TO PERFORM THEIR DUTIES IN 1981.
1672	RV-P	DCL-85-152/153	85-16, 85-89, 33	P	PULLMAN FAILED TO AUDIT TO SEE IF THE PERSON OR DEPARTMENT RESPONSIBLE FOR DEFINING AND IMPLEMENTING THE OVERALL EFFECTIVENESS OF THE CARDINAL QUALITY PROGRAM REPORTED ON EFFECTIVENESS OF PROGRAM.
1673	RV-P	DCL-85-152/153	85-16, 85-39,33	P	PG&E QA INSTRUCTIONS DO NOT SPECIFICALLY PROVIDE FOR A SYSTEM OF ID, DOC & SEGREGATION OF ALL CARDINAL MATL PREVIOUSLY PURCHASED AND INSTALLED BY

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					PULLMAN IN THE PLANT, NCR TO 10CFR50 APP B, XV
1674	RV-P	DCL-85-152/153	85-16, 85-39, 33	E	FAILURE BY PG&E/PULLMAN'S DR#9173 TO IDENTIFY DOC & SEGREGATE ALL CARDINAL MATERIALS PREVIOUSLY PURCHASED AND INSTALLED BY PULLMAN IN THE PLANT, IS A SIGNIFICANT CONDITION ADVERSE TO QUALITY
1675	RV-P	DCL-85-152/153	85-16, 85-39,33	P	PG&E DOES NOT PROVIDE A SYSTEM OF IDENTIFICATION, DOCUMENTATION AND SEGREGATION OF ALL CARDINAL MATERIALS PREVIOUSLY PURCHASED AND INSTALLED IN THE PLANT-NONCONFORMANCE TO 10CFR50, APP B, CRIT XV&XVI
1676	RV-P	DCL-85-152/153	85-16, 85-39, 33	P	PULLMAN DR#9173 ONLY PROVIDES FOR A SYSTEM OF IDENTIFICATION AND DOCUMENTATION FOR MATERIAL MANUFACTURED BY CARDINAL IN PULLMAN'S WAREHOUSE/STORAGE AREAS.
1677	RV-P	DCL-85-152/153	85-16, 35-39, 33	P	PULLMAN DR#9173 (12-21-84) DOES NOT PROVIDE FOR A SYSTEM OF IDENTIFICATION, DOCUMENTATION, SEGREGATION AND DISPOSITION OF CARDINAL MATERIALS. PREVIOUSLY PURCHASED AND INSTALLED-SEE 10CFR50, APP B, XV
1678	OI		ABM 1/7/86, 33	P	SENSITIVE
1679	OI		ABM 1/7/86, 33	P	SENSITIVE
1680	OI		ABM 1/7/86, 33	P	SENSITIVE
1681	OI		ABM 1/7/86, 33	P	SENSITIVE

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ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1682	OI		ABM 1/7/86, 33	P	SENSITIVE
1683	OI		ABM 1/7/86, 33	P	SENSITIVE
1684	NRR	DCL-85-212	33	R	UNIT 1 PIPE SUPPORTS RECEIVED MODIFICATIONS WITHOUT ASSESSING THE IMPACT FROM PRIOR MODIFICATIONS ON SAME PIPE SUPPORT.
1685	NRR	DCL-85-212	33	R	ISOMETRIC DRAWINGS WERE USED AS THE PRIMARY VEHICLES FOR ENGINEERING REVIEW AND ANALYSES, BUT THEY DID NOT REFLECT ALL THE CHANGES RECORDED ON AS-BUILT DRAWINGS.
1686	RV	DCL-85-212	ABM 11/14/85,33		OUTDATED ISOMETRICS DRAWINGS OCCURRED FROM A LOOPHOLE IN THE PROCEDURE TO UPDATE DRAWINGS, WHICH DID NOT REQUIRE CHANGES TO PIPING LINES FROM DIFFERENT SYSTEMS IN THE SAME SUPPORT AREA, TO BE NOTED.
1687	NRR	DCL-85-212	33	E	BECHTEL FLUD COMPUTER PROGRAM HAS AN ERROR IN THE TIME STEP, THE TIME INTERVAL IN WHICH THE PROGRAM CALCULATES A NEW SET OF CONDITIONS FOR ADJACENT COMPARTMENTS-USED FOR PIPE BREAKS & HVAC DESIGN
1688	NRR	DCL-85-212	33	E	BECHTEL FLUD COMPUTER PROGRAM ERRORS COULD CAUSE A HVAC ENGINEER TO SIGNIFICANTLY UNDERDESIGN A SYSTEM FOR AN ACTUAL PIPE BREAK.
1689	NRR	DCL-85-212	33	E	BECHTEL FLUD COMPUTER PROGRAM ERROR COULD CAUSE SIGNIFICANT UNDERDESIGNING OF THE HVAC SYSTEM WHICH CAN CAUSE SYSTEM FAILURE WHICH WOULD EFFECT

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
					CONTROL INSTRUMENTS & CAN TURN A MINOR TO MAJOR PROBLEM
1690	RV	DCL-85-212	ABM 11/14/85,33		DRAWING ERRORS FOUND DURING EARLY 1982 CHECK RAISES QUESTIONS ON ACCURACY OF DESIGN QUALITY ASSURANCE AND LATER ENGINEERING REVIEWS PERFORMED WITH THESE DRAWINGS FOR SEISMIC DESIGN REVIEW.
1691	NRR	DCL-85-212	33	D	ENGINEERING CALCULATIONS OF OFF-SITE CONSULTANT(S) CONTAINED SOME MISTAKES AND ERRORS IN ALL BUT A FEW OF THE PACKAGES, SOME CONTAINED SIGNIFICANT ERRORS
1692	NRR	DCL-85-212	33	R	ENGINEERING CALCULATIONS USED WRONG FORMULA AND UNDER ESTIMATED THE STRESSES IN WELDS ATTACHING BASE PLATES TO STRUCTURAL STEEL CHANNELS AND ANGLES, WHERE TORSIONAL OR TWISTING FORCES WERE APPLIED.
1693	NRR	DCL-85-212	33	R	STRUDL COMPUTER PROGRAM USE RESULTED IN CONFUSION REGARDING THE ORIENTATION OF THE PRINCIPAL AXIS OR BEAM ELEMENTS, SOMETIMES THEY WERE ORIENTED 90 DEGREES FROM ACTUAL
1694	NRR	DCL-85-212	33	R	STRUDL COMPUTER PROGRAM USE OF DEFAULTS FOR THE UNBRACED LENGTH OF BEAM MEMBERS, RESULTED IN AN OVER ESTIMATION OF ALLOWABLE LOADS BY UP TO 400 PERCENT
1695	NRR	DCL-85-212	33	R	STRUDL COMPUTER PROGRAM USE RESULTED IN 50 PERCENT OR MORE UNDERESTIMATE OF BASE PLATE STRESSES, DUE TO INSUFFICIENT PRECISE MODELING OF THE LOCATION AT WHICH STRESSES WERE CALCULATED, VICE ACTUAL

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1696	NRR	DCL-85-212	33	R	STRUDL COMPUTER PROGRAM WAS USED ON SITE DESPITE KNOWLEDGE OF INACCURACIES, PER OFF-SITE MANAGEMENT CONSULTANT(S) DIRECTIONS-WHICH MEANT ERRORS WERE REPEATED INDEFINITELY
1697	NRR	DCL-85-212	33	R	EXPANSION CONCRETE ANCHORS USE IN AREAS SUBJECT TO VIBRATORY OR SHOCK LOADS IS QUESTIONABLE, PER INTERNATIONAL CONGRESS OF BUILDING OFFICIALS RESEARCH REPORT NO. 2156 AND STATEMENTS BY HILTI PERSONNEL
1698	NRR	DCL-85-212	33	R	M-9 DESIGN GUIDE MISTAKENLY ALLOWS ALLOWABLE STRESSES APPROACHING YIELD WHILE ONLY REQUIRING THAT THE MEMBER BE DESIGNED TO ELASTIC CRITERIA. PLASTIC DESIGN REQUIREMENTS IN AISC CODE SHOULD BE USED
1699	NRR	DCL-85-212	33	R	M-9 DESIGN GUIDE ERRORS COULD RESULT IN PIPE SUPPORTS BEING UNDERDESIGNED TO ONLY WITHSTAND 89 PERCENT OF THE STRESSES FROM A HOSGRI EARTHQUAKE - BECAUSE OF INCORRECT CALCULATED ALLOWABLE STRESSES
1700	NRR	DCL-85-212	33	D	UNCONTROLLED DOCUMENTS WERE USED BY OFF-SITE CONSULTANT(S) FOR WORK, SINCE BECHTEL AND PG&E SENT THEM DOCUMENTS WITHOUT LETTERS OF TRANSMITTAL TO ASSURE THAT DOCUMENTS WERE CURRENT
1701	NRR	DCL-85-212	33	D	CALCULATION PACKAGES ACCEPTANCE STANDARDS WERE AN AREA OF CONFUSION FOR OFF-SITE CONSULTANTS, WHICH RAISES THE QUESTIONS ON WHETHER DCPO PROCEDURES P-6 AND I-26 WERE TRANSMITTED IN A TIMELY MANNER.

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1702	NRR	DCL-85-212	ABM 3/13/86,33	D	CALCULATION PACKAGES HAD QUOTAS IMPOSED ON THE NUMBER OF PACKAGES PROCESSED DAILY BY PERSONNEL AT OFF-SITE CONSULTANT(S), THAT COULD HAVE OVERRIDDEN QUALITY CONCERNS
1703	NRR	DCL-85-212	33	D	PERSONNEL AT OFF-SITE CONSULTANT(S) OFTEN ASSUMED THEIR RESPONSIBILITIES FOR EXTENDED PERIODS PRIOR TO RECEIVING ANY QUALITY ASSURANCE INDOCTRINATION
1704	NRR	DCL-85-212	33	D	QUALITY ASSURANCE SURVEILLANCE ACTIVITIES AT OFF-SITE CONSULTANT(S) WERE INADEQUATE, BECAUSE THEY ONLY OCCURRED ON AN ERRATIC FREQUENCY OR BASIS
1705	NRR	DCL-85-212	33	D	QUALITY ASSURANCE AUDITING ACTIVITIES AT OFF-SITE CONSULTANT(S) WERE INADEQUATE, BECAUSE THEY FAILED TO CHECK FOR THE FULL EXTENT OF PRIOR ERRORS THAT COULD BE REPRESENTED BY SPECIFIC FINDINGS
1706	RV-P	DCL-85-212	ABM 12/16/85,33		THE USE OF ASTM A-307, A-325, A-194-B7, AND OTHER MATERIALS AS WELL IN WELDED APPLICATIONS, CLEARLY INDICATE A PERVASIVE BREAKDOWN OF QUALITY ASSURANCE IN REGARD TO WELDED STUDS-ALSO NO DESIGN REVIEW
1707	NRR	DCL-85-212	33	R	PG&E FALSELY STATED THAT THE (AISC) HAS ENDORSED THE ANALYSIS OF AUSTRALIAN PAPERS THAT APPEAR TO SUPPORT THE USE OF STRUCTURAL STEEL "ANGLES", AND IS APPLICABLE TO DIABLO CANYON.
1708	OI		ABM 1/7/86,33	P	SENSITIVE

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1709	OI		ABM 1/7/86,33	P	SENSITIVE
1710	OI		ABM 1/7/86,33	P	SENSITIVE
1711	OI		ABM 1/7/86,33	P	SENSITIVE
1712	RV	DCL-85-212	ABM 8/6/85,33	P	PARAMOUNT STANCHIONS 5/5 RR AND 6/6 RR. MESSRS. R. NOLLE & T. PACIFICO PROVIDED MISLEADING AND FALSE STATEMENTS TO NRC ABOUT STANCHIONS BEING PREPARED FOR FULL PENETRATION WELDS AND RECEIVED THEM.
1713	RV	DCL-85-212	ABM 8/6/85,33	P	PARAMOUNT ALLEGATION ON STANCHIONS 5/5RR & 6/6RR:NRC HAS DERIVED A MISCONCEPTION FROM NRC AVAILABLE DOCUMENTATION (PHOTOGRAPHS ONLY) ABOUT THE EXISTANCE OF A FILLET CAP ON THE INTERIOR OF STANCHIONS
1714	RV	DCL-85-212	ABM 8/6/85,33	P	PG&E'S RESPONSE IN DCL 239 TO ALLEGATIONS JIR 76 WAS FALSE. FINAL AS BUILT DRAWINGS WITH INSPECTOR SIGNATURES OF DONALD DUCK, MICKEY MOUSE, ROY ROGERS AND GENE AUTRY WERE USED ON SITE.
1715	RV		MEMO DTD 5/1/85,33	P	SECURITY PERSONNEL ARE IMPROPERLY EXEMPTED FROM SEARCH REQUIREMENTS.(SENSITIVE)
1716	OI		ABM 5/21/85,33	p	SENSITIVE
1717	OI		ABM 3/13/86,33	P	SENSITIVE
1718	OI		ABM 5/21/85,33	P	SENSITIVE
1719	RV		ABM 7/12/85,33	E	"SPENT" PLUTONIUM HAD BEEN STORED ON SITE FOR 19 YEARS

DIABLO CANYON ALLEGATIONS

ALLEG#	RESP	RESPONSE LTR #	CLOSING REF	UNIT2	CHARACTERIZATION
1720	RV		85-26,33	E	NO ONE INITIALLY VERIFIED THAT THE HILTI KWIK BOLTS WERE PUT IN O.K. -- BOLTS WERE FOUND WELDED TO THE BACK SIDE OF FACE (BASE?) PLATES
1721	RV		85-26,33	E	THERE WERE SABOTAGE ISSUES THAT WERE NEVER ADDRESSED
1722	RV-P	DCL-85-332	ABM 11/14/85,33	P	DESIGN CHANGES DONE AS CORRECTIVE ACTION FOR PULLMAN DR'S WERE NOT SUBJECTED TO DESIGN CONTROL REVIEWS EQUAL TO ORIGINAL DESIGN i. e. PG&E HAD NO METHOD TO CONTROL FIELD DESIGN CHANGES
1723	RV-P	DCL-85-332	ABM 11/14/85,33	P	UNIT 2 SYSTEMS WALKDOWN WAS INCOMPLETE - PIPING INSIDE UNIT 1 PROTECTED AREA WAS NOT WALKED DOWN AND DRAWINGS USED FOR WALKDOWN WERE NOT CURRENT
1724	RV-P	DCL-85-332	ABM 11/14/85,33	P	UNIT 2 SYSTEM WALKDOWNS WERE CONDUCTED WITHOUT A PROCEDURE AND DEFICIENCIES WERE NOT DOCUMENTED ON DCNs
1725	RV-P	DCL-85-332	ABM 11/14/85,33	E	CONDUIT AND ELECTRICAL PANELS IN THE INTAKE STRUCTURE WERE DAMAGED BY CARBON ARCING
1726	RV		85-33,33	P	FAILURE OF AN INDIVIDUAL TO FOLLOW ESTABLISHED PROCEDURES ENTERING A RADIOLOGICAL CONTROLLED AREA ON 5/7/85.
0006A	NRR		21	E	INSTRUMENTATION AND CONTROLS USED TO ISOLATE MAIN FEEDWATER FLOW FOLLOWING A MAIN STEAMLINE BREAK ARE NOT SAFETY RELATED
0061A	RV		21	U	SENSITIVE/H.P. FOLEY USED UNAPPPROVED DRAWING

NRC FORM 335
(2-84)
NRCM 1102
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13 ABSTRACT (200 words or less)

Supplement 33 to the Safety Evaluation Report for the Pacific Gas and Electric Company's Diablo Canyon Nuclear Power Plant, Units 1 and 2 (Docket Nos. 50-275 and 50-323) has been prepared jointly by the Office of Nuclear Reactor Regulation and the Region V Office of the U.S. Nuclear Regulatory Commission. The supplement reports on the status of the staff's investigation, inspection, and evaluation of allegations and concerns that have been identified to the NRC through March 1986. The report includes a complete listing of all allegations and concerns, indicating the status of their resolution. The NRC staff concludes that the technical issues raised in the allegations with regard to the design, construction, and safe operation of Diablo Canyon Units 1 and 2 have been satisfactorily resolved and no further action is required.

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